

**NALSAR PROXIMATE EDUCATION
NALSAR UNIVERSITY OF LAW, HYDERABAD
P.G.DIPLOMA IN PATENTS LAW**

2012-13

Paper II – Practical

(Exploitation of Patents – Drafting, Specification & Patent Writing)

Time: 2 ½ hours.

TOTAL MARKS: 90

INSTRUCTIONS TO CANDIDATES

- 1. The questions to be interpreted as given and no clarification can be sought from the invigilator.**
- 2. Do not draw or attaché figures.**
- 3. The claim drafting will carry 50 marks.**
- 4. The rest of the specification will carry 40 marks.**
- 5. Attempt only one choice – either Part A or Part B.**

Part A

Omar of Hyderabad is an engineering student and has a small workshop in the garage of his house to experiment small inventions. A couple of months ago his grandfather was badly injured on a rainy day by a speeding vehicle and was admitted to hospital and recovered later. The accident happened on a rainy day at around 9 p.m. when he was walking home via a main road after shopping in a kirana shop. Due to the rains there were no street light and he could not see properly the approaching vehicle. The Vehicle could not see him crossing the road with a black umbrella due to poor visibility. Omar kept thinking about such situations in Indian roads especially elderly people falling as victim to such accidents. He wanted to invent a safety device. After working for a month he came out with the invention of an Umbrella with an illuminating device. He worked a prototype and found it as an effective solution to such accidents. He wanted to patent the same and approaches you with the following brief of his invention.

You are required to write the complete specification to file a National Application based on the following invention disclosure. Omar has provided the diagrams and a brief description which need not be repeated in the Specification.

The present invention generally relates to an illumination device for **umbrella**, more particularly to an illumination member that is installed among the **umbrella** ribs, on the rib or on the runner tubular and can automatically activate or cut off the power while opening or closing an **umbrella**.

On patent search it was found that prior **devices (umbrellas)** is able to shield sunshine, other functions shall be mostly pointing to the aspect of shielding rain. Hence while walking in the rain or a dark place, people holding umbrellas may not be clearly visible by car drivers and motorcycle drivers, and car accident shall be happening more often, especially at night.

Umbrella with LED is thus developed. That is, LEDs are installed on the cap, shaft or handle, and manually turned on and off. The places of such LEDs as cap, shaft or handle, will affect illumination, and the illumination directions of the LEDs are only toward up and down. So that in case of having no other lighting sources, people holding umbrellas will not be clearly visible by car drivers and motorcycle drivers, and it must be seriously dangerous to those people who hold umbrellas at night; on the other hand, the prior **umbrella** with LED has following disadvantages as well:

While the **umbrella** is out of order, LED may also be useless. User must manually turn on LED, and it still lacks convenience. As a conclusion, the present **umbrella** with LED still has a long way to go for improving aforesaid disadvantages. Therefore, to provide an illumination device for **umbrella** that can automatically activate or cut off the power while opening or closing an **umbrella** and concentrate light in order to clearly show up people holding umbrellas shall be a best solution.

The main objective of the present invention is to provide an illumination device for **umbrella** in order to set at least one manual installing and dismantling illumination device on an **umbrella**.

The second objective of the present invention is to provide an illumination device for **umbrella** that has the functions of emitting light upwardly and emitting light downwardly, therefore the user can be clearly visible. So that the possibility of night accident can be reduced while walking in the rain.

The third objective of the present invention is to provide an illumination device for **umbrella**, wherein the power of the illumination device can be automatically activated or cut off while the **umbrella** is opened or closed.

To reach above objectives, the illumination device for **umbrella** comprises at least one illumination member and at least one magnetic member, wherein the illumination member has a lampshade with at least one illumination element and a lamp stand, the lamp stand has a battery, a control circuit with a sensing switch and a control switch connecting with the sensing switch, the illumination member is installed among the **umbrella** ribs, on the **umbrella** shaft or the runner tubular of the **umbrella** body. Through the magnetic member controlling the illumination states of the illumination member, the illumination member may be to automatically activated while the **umbrella** body is opened, and the illumination member may be automatically turned off while the **umbrella** body is closed.

Preferably, the **umbrella** body has a **umbrella** shaft having an runner tubular, a plurality of **umbrella** ribs integrated with the top of the **umbrella** shaft and radially disposed, and an **umbrella** fabric disposed on the scope that the **umbrella** ribs reach and the illumination member has at least one fixing base in order to stick the illumination member onto the **umbrella** body.

The illumination member can be fixed by way of screw, base or other fixing methods so as to fasten the illumination member on to the **umbrella** body and the control switch of the illumination member is able to switch to a state selected from the group consisting of continuous illumination state (ON), continuous dousing state (OFF) and automatic illumination state (Auto).

The illumination element is an LED or other components capable of lighting and the magnetic member is installed on the rib, the **umbrella** shaft or the runner tubular of the **umbrella** body, the illumination member is installed on the rib, the **umbrella** shaft or the runner tubular of the **umbrella** body.

DETAILED DESCRIPTION OF THE INVENTION

Following preferred embodiments and figures will be described in detail so as to achieve aforesaid objects.

With references to FIG. 1A, FIG. 1B, FIG. 2, FIG. 3A, and FIG. 3B, which illustrate a schematic 3D structural view of a first preferred embodiment of the illumination device for **umbrella** of the present invention, a schematic lateral structural view of the first preferred embodiment of the illumination device for **umbrella** of the present invention, a schematic control circuit view of the first preferred embodiment of the illumination device for **umbrella** of the present invention, and schematic application views of the first preferred embodiment of the illumination device for **umbrella** of the present invention. As shown in figures, the illumination device is integrated with an **umbrella** body 3 that has a **umbrella** shaft 31, **umbrella** ribs 32, 33 and an **umbrella** fabric 34 and includes: at least one illumination member 1, which has a lampshade 11 with at least one illumination element 111 and a lamp stand 12, wherein the lamp stand 12 has a battery 121, a control circuit 122 with a sensing switch 1221 and a control switch 123 connecting with the sensing switch 1221, the illumination member 1 is installed on the rib 33 (or rib 32) of the **umbrella** body 3, the control switch 123 is able to switch the states of illumination; and at least one set of magnetic members 2, which is installed on the rib 33 (or rib 32) the **umbrella** body 3 and controls the sensing switch 1221 of the illumination member 1, each of the to magnetic members 2 is a magnet.

Preferably, the **umbrella** body 3 has a **umbrella** shaft 31 having an runner tubular 311, a plurality of **umbrella** ribs 32, 33 integrated with the top of the **umbrella** shaft 31 and radially disposed, and an **umbrella** fabric 34 disposed on the scope that the **umbrella** ribs 32, 33 reach.

Preferably, the control switch 123 of the illumination member 1 is able to switch to a state selected from the group consisting of continuous illumination state (ON), continuous dousing state (OFF) and automatic illumination state (Auto). Preferably, the illumination element 111 is an LED or other components capable of lighting. Preferably, the illumination member 1 can be fixed by way of screw, base or other fixing methods so as to fasten the illumination member 1 onto the rib 33 (or rib 32). Preferably, the illumination member 1 has at least one fixing base 124

in order to stick the illumination member 1 onto the **umbrella** body 3.

With references to FIG. 2, FIG. 4A and FIG. 4B, which illustrate a schematic control circuit view of the illumination device for **umbrella** of the present invention and schematic application views of a second preferred embodiment of the illumination device to for **umbrella** of the present invention. Compared to the first preferred embodiment, the difference is that the illumination member 1 can be installed on the runner tubular 311 of the **umbrella** shaft 31 of the **umbrella** body 3. The sensing switch 1221 of the illumination member 1 normally keeps on an open state. While the magnetic members 2 are adjacent to the illumination member 1, the sensing switch 1221 controls the control circuit 122 for conduction in order to turn on the illumination member 1. (the magnetic members 2 are to control the sensing switch 1221 of the illumination member 1)

For the second preferred embodiment, through the control switch 123, the illumination member 1 is able to switch to the continuous illumination state (ON), the continuous dousing state (OFF) or the automatic illumination state (auto). Such that the illumination member 1 keeps lighting while a user manually switch the control switch 123 to the continuous illumination state (ON); on the other hand, the illumination member 1 keeps off-lighting while the user manually switch the control switch 123 to the continuous dousing state (OFF); and while the user manually switch the control switch 123 to the automatic illumination state (auto), the illumination member 1 with the sensing switch 1221 is gradually adjacent to the magnetic members 2 if the **umbrella** body 3 is opened, the magnetic members 2 may activate the sensing switch 1221 of the control circuit 122 to start the illumination element 111 of the illumination member 1, as shown in FIG. 4A. If the **umbrella** body 3 is closed, the illumination member 1 with the sensing switch 1221 is gradually away from the magnetic members 2 so as to cut off the sensing switch 1221 of the control circuit 122, hence the power from the battery 121 of the illumination member 1 is cut off as well, and the illumination element 111 of the illumination member 1 is turned off, as shown in FIG. 4B.

PART A – FIGURES

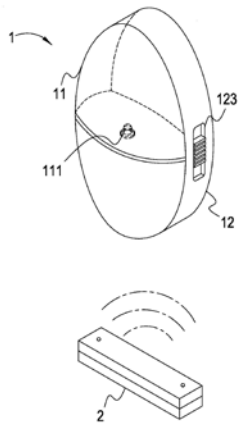


FIG. 1A

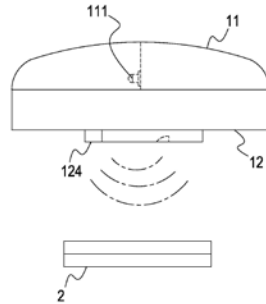


FIG. 1B

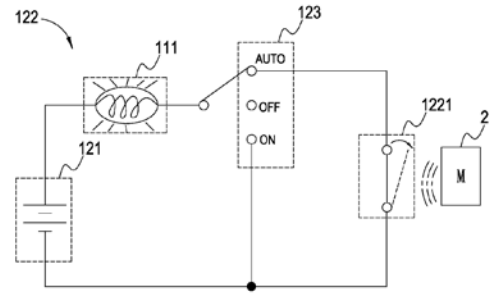


FIG. 2

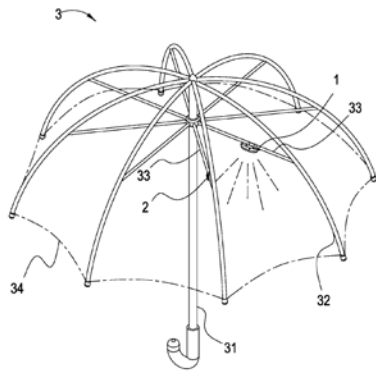


FIG. 3A

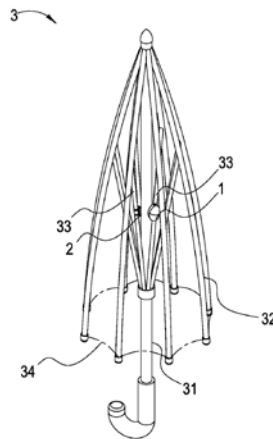


FIG. 3B

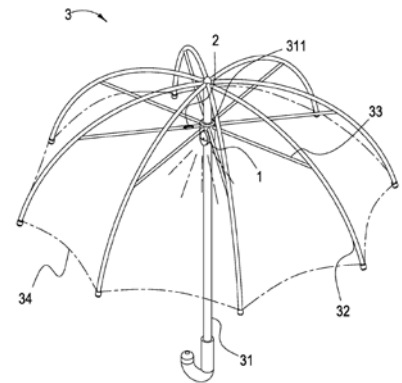


FIG. 4A

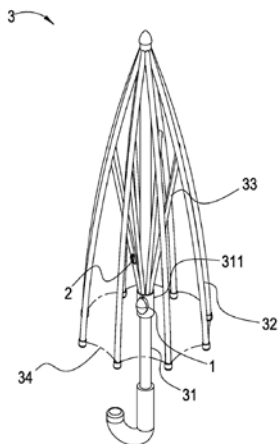


FIG. 4B

Part B

*Nandini an independent inventor approaches you with the following invention disclosure to draft a complete specification for filing a patent. **You are required to draft the complete specification.** The inventor has not provided any diagram, as it is not necessary for the invention.*

The Invention Disclosure:

The present invention is to provide a **novel compound** applying to skin and a novel method making the same. Applying afore compound to the skin decreases the chance of damaging the skin from the ultraviolet. Thereby, the skin is protected, and concurrently, the allergic reaction could be reduced. While essences of various plants and humectant as well as moisturizing components are properly added, the compound is especially beneficial to ameliorate users' skin.

The compound in accordance with the present invention mainly comprises first components by different weight percentages as follows: 10% to 70% of Dimethicone Crosspolymer, 5% to 20% of Dimethicone/Vinyl Dimethicone Crosspolymer, 7% to 60% of Cyclotetrasiloxane, 4.2% to 60% of Dimethicone, 0.1% to 5% of Cetyl PEG/PPG-15/15 Butyl Ether Dimethicone, 1% to 10% of Squalane, and 1% to 15% of Titanium Dioxide.

The compound further comprises second components by different weight percentages as follows: 0.01% to 2% of Silica, 0.01% to 2% of Silica Dimethyl Silylate, and 5% to 60% of Isododecane. Preferably, the compound further comprises third components by different weight percentages as follows: 0.5% to 10% of Trimethylsiloxysilicate, 1% to 10% of C12-15 Alkyl benzoate, and 1% to 10% of 2-Ethylhexy Palmitate.

The compound further comprises fourth components by different weight percentages as follows: 1% to 15% of 1, 3 Propylene glycol, 1% to 20% of magnesium silicate, and 1% to 20% of Mica. Also an additive is properly added. The additive includes components by different weight percentages as follows: 0.01% to 5% of Iron Oxide black, 0.01% to 5% of Iron Oxide yellow, 0.01% to 5% of Iron Oxide red, 0.005% to 1% of Tartrazine Aluminum Lake, 0.005% to 1% of Erythrosine Aluminum Lake, 1% to 20% of Magnesium stearate, 0.05% to 0.5% of Chlorhexidine Gluconate, 0.01% to 3% of Ginseng Fragrant Oil, 0.01% to 3% of Angelica Fragrant Oil, 0.01% to 3% of Chuanxiong Fragrant Oil, 0.01% to 3% of Wolfberry Fragrant Oil, 0.01% to 5% of Duhuo Fragrant Oil, 0.01% to 5% of Sandalwood Fragrant Oil, 0.01% to 5% of Cinnamon Fragrant Oil, 0.01% to 3% of Ginger Fragrant Oil, and 0.01% to 0.05% of Butylated hydroxytoluene.

A method making afore compound applying to skin has the following steps:

- A. Combining afore magnesium silicate, Iron Oxide black, Iron Oxide yellow, Iron Oxide red, Titanium Dioxide, Mica, Tartrazine Aluminum Lake, Erythrosine Aluminum Lake, and Magnesium stearate to form a compound;
- B. Combining and heating afore Silica Dimethyl Silylate, Trimethylsiloxysilicate, Isododecane,

Cyclotetrasiloxane, C12-15 Alkyl benzoate, Dimethicone, 2-Ethylhexyl Palmitate, Squalane, and Butylated hydroxytoluene until a temperature reaches 40 to 50 Celsius degrees; after the Trimethylsiloxysilicate and the Butylated hydroxytoluene are dissolved, the compound in step A is poured therein and evenly mixed therewith to form into a first mixed solution;

C. Adding afore Dimethicone Crosspolymer, Dimethicone/Vinyl Dimethicone Crosspolymer, and Silica into mixed solution as described in Step B to form into a second mixed solution;

D. Combining afore 1,3-Propylene glycol and Chlorhexidine Gluconate to form into a combined solution and dissolving the combined solution below 40 to 50 Celsius degrees, thereby adding the combined solution that is dissolved into the second mixed solution as described in Step C to form into a third mixed solution;

E. Adding and evenly mixing afore Cetyl PEG/PPG-15/15 Butyl Ether Dimethicone into the third mixed solution as described in step D to form into a fourth mixed solution; and F. Adding and evenly mixing afore Ginseng Fragrant Oil, Angelica Fragrant Oil, Chuanxiong Fragrant Oil, Wolfberry Fragrant Oil, Duhuo Fragrant Oil, Sandalwood Fragrant Oil, Cinnamon Fragrant Oil, and Ginger Fragrant Oil into the fourth mixed solution as described in step E. A sieve with 150 to 1000 meshes is utilized to sieve the compound.

The present invention has the following advantages:

1. The skin is limited from sun exposure, so the skin would not be irritated, which preferably reduces the allergic reaction.
2. The essences of various plants and the components that moisturize skin are beneficial for skin care.
3. Functions like protecting skin from sun exposure, moisturizing, anti-wrinkle, covering spots and applying blusher, anti-acnes, and whitening are achievable.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Following embodiments are depicted details of the present invention.

A compound applying to skin mainly comprises first components by different weight percentages as follows: 10% to 70% of Dimethicone Crosspolymer, 5% to 20% of Dimethicone/Vinyl Dimethicone Crosspolymer, 7% to 60% of Cyclotetrasiloxane, 4.2% to 60% of Dimethicone, 0.1% to 5% of Cetyl PEG/PPG-15/15 Butyl Ether Dimethicone, 1% to 10% of Squalane, and 1% to 15% of Titanium Dioxide.

Besides afore first components, second components, third components, and fourth components are also added as follows:

The compound further comprises second components by different weight percentages as follows: 0.01% to 2% of Silica, 0.01% to 2% of Silica Dimethyl Silylate, and 5% to 60% of Isododecane. The compound further comprises third components by different weight percentages as follows: 0.5% to 10% of Trimethylsiloxysilicate, 1% to 10% of C12-15 Alkyl benzoate, and 1% to 10%

of 2-Ethylhexy Palmitate. The compound further comprises fourth components by different weight percentages as follows: 1% to 15% of 1, 3 Propylene glycol, 1% to 20% of magnesium silicate, and 1% to 20% of Mica.

An additive is properly added. The additive includes components by different weight percentages as follows: 0.01% to 5% of Iron Oxide black, 0.01% to 5% of Iron Oxide yellow, 0.01% to 5% of Iron Oxide red, 0.005% to 1% of Tartrazine Aluminum Lake, 0.005% to 1% of Erythrosine Aluminum Lake, 1% to 20% of Magnesium stearate, 0.05% to 0.5% of Chlorhexidine Gluconate, 0.01% to 3% of Ginseng Fragrant Oil, 0.01% to 3% of Angelica Fragrant Oil, 0.01% to 3% of Chuanxiong Fragrant Oil, 0.01% to 3% of Wolfberry Fragrant Oil, 0.01% to 5% of Duhuo Fragrant Oil, 0.01% to 5% of Sandalwood Fragrant Oil, 0.01% to 5% of Cinnamon Fragrant Oil, 0.01% to 3% of Ginger Fragrant Oil, and 0.01% to 0.05% of Butylated hydroxytoluene.

In the first components, the Dimethicone Crosspolymer is served as an emulsion stabilizer, the Dimethicone/Vinyl Dimethicone Crosspolymer is served as a lipophilic thickening agent, the Cyclotetrasiloxane is served as a solvent of afore components, the Dimethicone is served as a waterproof film, the Cetyl PEG/PPG-15/15 Butyl Ether Dimethicone is served as an emulsifier, the Squalane is served as a skin softener and wetter, and the Titanium Dioxide is served as a sun-screening agent.

In the second components, the Silica is served as a polishing agent, the Silica Dimethyl Silylate is served for oil control, and the Isododecane is served as a solvent.

In the third components, the Trimethylsiloxysilicate is served as a waterproof film and waterproofing, the C12-15 Alkyl benzoate is served as a skin softener, and the 2-Ethylhexyl Palmitate is served as a keratolytics agent.

In the fourth components, the 1,3-Propylene glycol is served as a humectant, the magnesium silicate is served as an emulsifier, and the Mica 19 is served for moisturizing and a colorant.

Additionally, in the additive, the Iron Oxide black, the Iron Oxide yellow, the Iron Oxide red, the Tartrazine Aluminum Lake, and the Erythrosine Aluminum Lake are served as a pigment. The Magnesium stearate is served as a colorant, the Chlorhexidine Gluconate is served as a bacteriostat, the Ginseng Fragrant Oil is served as an antioxidant and for firming skin, the Angelica Fragrant Oil is served for whitening and as an antioxidant, the Chuanxiong Fragrant Oil is served for moisturizing and whitening, the Wolfberry Fragrant Oil is served as an antioxidant and for anti-wrinkle, the Duhuo Fragrant Oil is served for anti-inflammation and moisturizing, the sandalwood Fragrant Oil is served for anti-inflammation, the Cinnamon Fragrant Oil is served for whitening and as an antioxidant, the Ginger Fragrant Oil is served as an antioxidant, and the Butylated hydroxytoluene is served as an antioxidant.

Thereby, the compound of the present invention favorably protects skin from sun exposure, which decreases the chance of irritation and allergic reaction, so this product is especially suitable for users who stay outdoors for a long time. Adding the essences of various plants and other moisturizers in the product especially leaves the skin delicate and elastic. As a result, the skin maintains healthy and ruddy. Accordingly the compound of the present invention is beneficial for daily skin care. While afore pigments are properly added in the compound with suitable proportions, the compound is further served as the spots clearer and the blusher.