The present invention relates to a tube type cosmetic case. According to the present invention, there is provided a tube type cosmetic case where cosmetics are discharged through a discharge hole by pressing a tube. The tube type cosmetic case includes a stationary body, a nozzle, and a rotary cap. The stationary body is fitted at an end of the tube, and includes a fixing shaft formed at a central portion thereof and spiral grooves formed from an upper end thereof to a middle portion thereof. The nozzle includes an outlet and protrusions, and ascends or descends by the rotation of the protrusion. The central portion of the outlet is opened, the protrusions are formed on an outer peripheral surface of the nozzle and fitted to the spiral grooves, cosmetics are discharged through the outlet, and the fixing shaft is inserted into the outlet. The rotary cap includes a through hole opened at an upper end thereof and vertical guide grooves formed therein. The nozzle moves through the through hole, the protrusions are fitted to the vertical guide grooves, and the rotary cap is fitted to an outer peripheral surface of the stationary body and makes the protrusions ascend or descend while being rotated.
TUBE TYPE COSMETICS CASE

TECHNICAL FIELD

[0001] The present invention relates to a tube type cosmetic case, and more particularly, to a tube type cosmetic case where a nozzle protrudes to the outside when a user rotates a rotary cap to use cosmetics and the nozzle enters the rotary cap and is stored in the rotary cap when the user rotates the rotary cap in a reverse direction after using the cosmetics.

BACKGROUND ART

[0002] Skin lotion, lotion, or eye cream is stored in a cosmetic case. In particular, tube type cosmetic cases, which are manufactured at low cost and conveniently used, have been widely used for gel-type cosmetics, such as lotion and eye cream.

[0003] However, whenever a user uses cosmetics, a fixed cap should be detached from a conventional tube type cosmetic case. After a user uses cosmetics, the cap should be attached to the cosmetic case. Therefore, there has been a problem in that it is not convenient for a user to use cosmetics since a user should repeat the above-mentioned actions whenever using cosmetics.

[0004] Further, when a user attaches and detaches the cap whenever using cosmetics, an inner portion of the cap or a portion of the cosmetic case adjacent to an outlet is smeared with cosmetics. In particular, there has been a problem in that the portion of the cosmetic case adjacent to the outlet is contaminated with foreign substances if the cap is lost or detached for a long time.

DISCLOSURE OF INVENTION

[0005] The present invention has been made to solve the above-mentioned problems, and an object of the present invention is to provide a tube type cosmetic case where a nozzle protrudes to the outside when a user rotates a rotary cap to use cosmetics and the nozzle enters the rotary cap and is stored in the rotary cap when the user rotates the rotary cap in a reverse direction after using the cosmetics.

[0006] Further, another object of the present invention is to provide a tube type cosmetic case where it is not troublesome to use cosmetics since a cap is not needed and does not need to be detached and there is no concern that the cap is lost.

[0007] Furthermore, still another object of the present invention is to provide a tube type cosmetic case where an end of an outlet is kept clean because an inner diameter of an upper portion of an outlet is formed to be smaller than that of a lower portion of the outlet and cosmetics remaining at an end of the outlet are sucked again due to vacuum pressure in a tube after the cosmetics are discharged by pressing the tube.

[0008] In order to solve the above-mentioned problems, according to an embodiment of the present invention, there is provided a tube type cosmetic case where cosmetics are discharged through a discharge hole by pressing a tube. The tube type cosmetic case includes a stationary body, a nozzle, and a rotary cap. The stationary body is fitted to an end of the tube, and includes a fixing shaft formed at a central portion thereof and spiral grooves formed from an upper end thereof to a middle portion thereof. The nozzle includes an outlet and protrusions, and ascends or descends by the rotation of the protrusion. The central portion of the outlet is opened, the protrusions are formed on an outer peripheral surface of the nozzle and fitted to the spiral grooves, cosmetics are discharged through the outlet, and the fixing shaft is inserted into the outlet. The rotary cap includes a through hole opened at an upper end thereof and vertical guide grooves formed therein. The nozzle moves through the through hole, the protrusions are fitted to the vertical guide grooves, and the rotary cap is fitted to an outer peripheral surface of the stationary body and makes the protrusions ascend or descend while being rotated.

[0009] Further, the stationary body may further include fixing grooves which are formed at upper and lower ends of each of the spiral grooves and to which the protrusions are fixed.

[0010] Furthermore, an inner diameter of an upper portion of the outlet may be formed to be smaller than that of a lower portion of the outlet, and the cosmetics remaining at the end of the outlet may be sucked again due to vacuum pressure in the tube after the cosmetics are discharged by pressing the tube.

[0011] As described above, according to the present invention, the following advantages are obtained: a nozzle protrudes to the outside when a user rotates a rotary cap to use cosmetics, and the nozzle enters the rotary cap and is stored in the rotary cap when the user rotates the rotary cap in a reverse direction after using the cosmetics.

[0012] Further, the following advantages are obtained: it is not troublesome to use cosmetics since a cap is not needed and does not need to be detached, and there is no concern that the cap is lost.

[0013] Furthermore, the following advantages are obtained: an end of an outlet is kept clean because an inner diameter of an upper portion of an outlet is formed to be smaller than that of a lower portion of the outlet and cosmetics remaining at an end of the outlet are sucked again due to vacuum pressure in a tube after the cosmetics are discharged by pressing the tube.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. 1 is a perspective view of a tube type cosmetic case according to a preferred embodiment of the present invention.

[0015] FIG. 2 is an exploded perspective view of the tube type cosmetic case according to the preferred embodiment of the present invention.

[0016] FIG. 3 is a cross-sectional view of the tube type cosmetic case according to the preferred embodiment of the present invention.

[0017] FIG. 4 is a view illustrating the operation of the tube type cosmetic case according to the preferred embodiment of the present invention.

[0018] FIG. 5 is a view illustrating the operation of the tube type cosmetic case according to the preferred embodiment of the present invention.

MODE FOR THE INVENTION

[0019] The present invention will be described in detail below with reference to drawings. Like reference numerals shown in each drawing refer to like elements.

[0020] FIG. 1 is a perspective view of a tube type cosmetic case according to a preferred embodiment of the present invention. FIG. 2 is an exploded perspective view of the tube type cosmetic case according to the preferred embodiment of the present invention. FIG. 3 is a cross-sectional view of the tube type cosmetic case according to the preferred embodi-
ment of the present invention. Referring to FIGS. 1 to 3, the tube type cosmetic case according to the preferred embodiment of the present invention includes a stationary body 100, a nozzle 200, and a rotary cap 300, and further includes fixing grooves 130.

0021] Cosmetics are stored in a tube 10. The tube 10 may be made of various materials, but it is preferable that the tube be made of a synthetic resin. A discharge hole 11 is formed at an upper end of the tube 10. As a user presses the tube 10, cosmetics are discharged through the discharge hole 11.

0022] The stationary body 100 is fitted and fixed to the end of the tube. The stationary body 100 has a cylindrical shape, and a fixing shaft 110 is formed at the central portion of the stationary body. The fixing shaft 110 is inserted into an outlet 210 to be described below, and a nozzle 200 to be described below ascends or descends along the fixing shaft 110.

0023] Further, spiral grooves 120 are formed on the stationary body 100 from an upper end thereof to a middle portion thereof. Protrusions 220 to be described below are fitted to the spiral grooves 120, and it is preferable that a pair of protrusions 220 be formed on the left and right portions of the nozzle so as to be stably fitted.

0024] Meanwhile, fixing grooves 130 may also be formed at upper and lower ends of each of the spiral grooves 120. The protrusions 220 to be described below ascend or descend along the spiral grooves 120 while being rotated, and may be fixed to upper or lower ends of the spiral grooves due to the fixing grooves 130. Further, it is preferable that the fixing grooves 130 be horizontally formed at the stationary body 100 so that the protrusions 220 are more stably fitted.

0025] The outlet 210 is formed at the central portion of the nozzle 200, and the fixing shaft 110 is inserted into the outlet. If a user presses the tube 10, cosmetics are discharged through the outlet 210. It is preferable that the diameter of the outlet 210 be larger than that of the fixing shaft 110 so that the cosmetics are smoothly discharged through the outlet 210.

0026] Further, the protrusions 220, which are fitted to the spiral grooves 120, are formed on the outer peripheral surface of the nozzle 200. If a rotary cap 300 to be described below is rotated, the protrusions 220 move along the spiral grooves 120. Accordingly, as the rotary cap 300 to be described below is rotated, the nozzle 200 ascends or descends.

0027] Meanwhile, the inner diameter of an upper portion of the outlet 210 may be formed to be smaller than that of a lower portion of the outlet. If the tube 10 is pressed, vacuum pressure is generated in the tube 10. Accordingly, a suction force is generated at the outlet 210. In this case, the inner diameter of the upper portion of the outlet 210 is formed to be smaller than that of the lower portion of the outlet so that the vacuum pressure generated as described above can be efficiently used. Therefore, a suction force generated at the upper portion of the outlet 210 is larger than that generated at the lower portion of the outlet 210. The present invention is characterized in that the inner diameter of the upper portion of the outlet 210 is formed to be smaller than that of the lower portion of the outlet as described above so that the cosmetics remaining at the end of the outlet 210 are more efficiently sucked again.

0028] The rotary cap 300 is fitted to the outer peripheral surface of the stationary body 100, and can be rotated in a left or right direction. A through hole 310 is formed at an upper end of the rotary cap 300, so that the nozzle 200 moves through the through hole.

0029] Further, vertical guide grooves 320 to which the protrusions 220 are fitted are formed in the rotary cap 300. The vertical guide grooves 320 are formed on the inner surface of the rotary cap 300 from an upper portion of the rotary cap to a lower portion thereof in a vertical direction.

0030] The operation of the tube type cosmetic case according to the preferred embodiment of the present invention will be described below in detail with reference to FIGS. 4 and 5.

0031] First, referring to FIG. 4, a user rotates the rotary cap 300, which is rotatably provided at the upper portion of the tube 10, in one direction. In this case, since the protrusions 220 are fitted to the vertical guide grooves 320 formed in the rotary cap 300, the nozzle 200 is rotated together with the protrusions 220.

0032] Meanwhile, the protrusions 220 are fitted to the spiral grooves 120 of the stationary body 100. Accordingly, when the rotary cap 300 is rotated, the nozzle 200 ascends along the spiral grooves 120. Therefore, as the rotary cap 300 is rotated and the nozzle 200 ascends, the upper portion of the nozzle 200 protrudes through the through hole 310 to the outside of the rotary cap. When the nozzle 200 is rotated and protrudes through the through hole 310 to the outside of the rotary cap as described above, a user discharges cosmetics by pressing the tube 10 and uses the cosmetics.

0033] Subsequently, referring to FIG. 5, a user rotates the rotary cap 300, which is rotatably provided at the upper portion of the tube 10, in a direction opposite to the direction corresponding to the ascent of the nozzle 200. In this case, since the protrusions 220 are fitted to the vertical guide grooves 320 formed in the rotary cap 300, the nozzle 200 is rotated together with the protrusions 220.

0034] Meanwhile, the protrusions 220 are fitted to the spiral grooves 120 of the stationary body 100. Accordingly, when the rotary cap 300 is rotated, the nozzle 200 descends while being rotated along the spiral grooves 120. Therefore, as the rotary cap 300 is rotated and the nozzle 200 descends, the upper portion of the nozzle 200 enters the rotary cap through the through hole 310. That is, the reverse operation of the operation described in FIG. 4 is performed. The present invention is characterized in that the nozzle 200 moves as the rotary cap 300 is rotated as described above.

0035] Preferred embodiments have been disclosed in the drawings and specification. Specific terms have been used herein. However, the specific terms have been used not to limit meanings or the scope of the present invention disclosed in claims, but to merely describe the present invention. Accordingly, those skilled in the art may understand that various modifications and changes may be made thereto. Therefore, the scope of the present invention should be defined by the appended claims.

1. A tube type cosmetic case where cosmetics are discharged through a discharge hole 11 by pressing a tube 10, the tube type cosmetic case comprising:
   a stationary body 100 that is fitted to an end of the tube 10, and includes a fixing shaft 110 formed at a central portion thereof and spiral grooves 120 formed from an upper end thereof to a middle portion thereof;
   a nozzle 200 that includes an outlet 210 and protrusions 220 and ascends or descends by the rotation of the pro
trusions 220, the central portion of the outlet being opened, the protrusions being formed on an outer peripheral surface of the nozzle and fitted to the spiral grooves 120, cosmetics being discharged through the outlet, and the fixing shaft 110 being inserted into the outlet from below; and

a rotary cap 300 that includes a through hole 310 opened at an upper end thereof and vertical guide grooves 320 formed therein, the nozzle 200 moving through the through hole, the protrusions 220 being fitted to the vertical guide grooves, and the rotary cap being fitted to an outer peripheral surface of the stationary body 100 and making the protrusions 220 ascend or descend while being rotated.

2. The tube type cosmetic case according to claim 1, wherein the stationary body 100 further includes fixing grooves 130 which are formed at upper and lower ends of each of the spiral grooves 120 and to which the protrusions 220 are fixed.

3. The tube type cosmetic case according to claim 1, wherein an inner diameter of an upper portion of the outlet 210 is formed to be smaller than that of a lower portion of the outlet, and

the cosmetics remaining at the end of the outlet 210 are sucked again due to vacuum pressure in the tube 10 after the cosmetics are discharged by pressing the tube 10.

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