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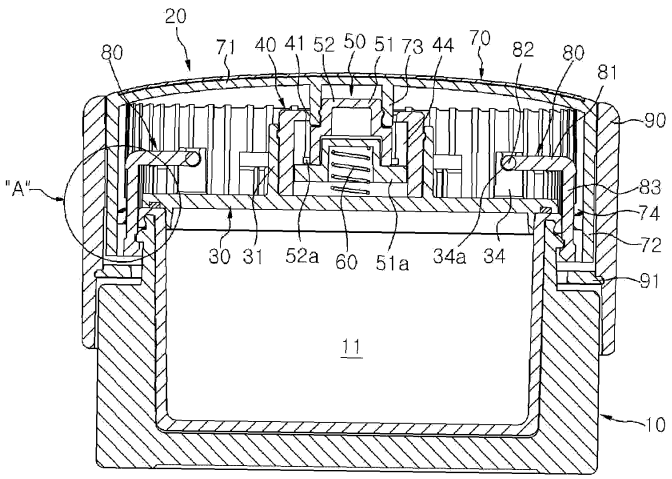
(54) COSMETICS CONTAINER HAVING CAP OPENED AND CLOSED BY ONE-TOUCH METHOD

(57) The present invention discloses a cosmetic container configured to be opened and closed by operation of a cap in a one-touch manner, in which a cap is conveniently removed from or coupled to a container body merely by manipulating a push cap in a one-touch manner. To this end, the cosmetic container according to the present invention includes a container body 10 including an accommodation space 11 for containing contents and a latching rim 14 formed on an outer circumferential surface of an opening 12, and a cap 20 configured to be unlocked from or locked to the container body in a one-touch manner, in which the cap 20 is removed from or coupled to the container body 10 by touching a push cap 70, vertical movement of which is controlled by an ascending/descending guide cap 40 and a knock member 50 elastically supported by an elastic member 60 inside the ascending/descending guide cap, so that one or more opening/closing operation units 80, each of which has a hinge-coupling portion, perform an opening/closing operation so as to be caught by or released from the latching rim 16 of the container body 10, thereby considerably conveniently and simply achieving an opening/closing manipulation of the cap 20 with respect to the container body 10.

[FIG. 4]



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Description

[Technical Field]

[0001] The present invention relates to a cosmetic container used to contain contents in various forms including solids as well as liquids such as creams, etc., and more particularly to a cosmetic container configured to be opened and closed by operation of a cap in a one-touch manner, in which a cap is conveniently removed from or coupled to a container body merely by manipulating a push cap in a one-touch manner, thereby providing convenience in an opening/closing manipulation of the cap when using the cosmetic container.

[Background Art]

[0002] In general, a container, which is used to contain various kinds of contents including cosmetics, comprises a container body for containing contents and a cap for safely protecting the contents contained in the container body and for opening and closing the container body so that the contents can be used. The cap for opening and closing the container body may employ various opening/closing structures depending on the kind, form or purpose of the contents, and, for example, a cap having a threaded engagement structure is currently widely used.

[0003] In spite of the simplicity of the engagement structure, the cap having a threaded engagement structure has problems in that it is required to hold the cap when intending to perform an opening/closing operation and in that an additional structure is required for preventing slippage when rotating the cap. Further, depending on the kind of contents, for example, in the case of cream-type cosmetics, the cap may become more slippery, making it difficult to perform the opening/closing operation, and may become insanitary when it is stained with the cosmetics during the opening/closing operation.

[0004] Furthermore, as seen from patent document 1 (KR 200437214 Y1), there has been proposed a safety cap, which opens and closes a container body in a manner such that push buttons provided at two opposite portions of an inner cap are grabbed with the hand and are pressed. The safety cap disclosed in patent document 1 may be more advantageous than a conventional cap having a threaded engagement structure; however, it has problems in that the two push buttons must be pressed at the same time and in that the inner cap must be manually lifted after an outer cap ascends due to the restoring force of a spring, which is released by pressing the push buttons, so that an annular coupling rim of the inner cap is bent outwards due to an elastic portion and is forcibly separated from an annular fixing rim provided at an opening in the container body, making it quite cumbersome and inconvenient to perform the opening/closing operation of the cap and increasing the likelihood of weakening of latching force of the elastic portion or of damage to the elastic portion due to frequent opening/closing operation of the cap, which is performed by forcibly bending the annular coupling rim provided at the inner cap using the elastic portion.

[Disclosure]

[Technical Problem]

[0005] The present invention has been made to solve the above problems with the prior art, and it is an object of the present invention to provide a cosmetic container configured to be opened and closed by operation of a cap in a one-touch manner, in which an opening/closing manipulation of a cap is more conveniently and simply achieved merely by pressing a push cap in a one-touch manner so that one or more opening/closing operation units provided inside the push cap are simultaneously unlocked from or locked to an opening in a container body.

[Technical Solution]

[0006] In accordance with the present invention, the above and other objects can be accomplished by the provision of a cosmetic container configured to be opened and closed by operation of a cap in a one-touch manner, including a container body including an accommodation space for containing contents and a latching rim formed on an outer circumferential surface of an opening, and a cap configured to be unlocked from or locked to the container body in a one-touch manner, in which the cap is removed from or coupled to the container body by touching a push cap, vertical movement of the push cap being controlled by an ascending/descending guide cap and a knock member elastically supported by an elastic member inside the ascending/descending guide cap, so that one or more opening/closing operation units, each having a hinge-coupling portion, perform an opening/closing operation so as to be caught by or released from the latching rim of the container body.

[0007] According to the present invention, the cap may include an inner airtight cap for sealing an upper end of the opening in the container body in an airtight manner, the ascending/descending guide cap fixedly coupled to an upper portion of the inner airtight cap, the knock member elastically supported by the elastic member inside the ascending/descending guide cap, the push cap fixedly coupled to the knock member and including latching ribs, the one or more opening/closing operation units arranged in the push cap so as to be separate from one another, each having a portion hingedly coupled to support ribs of the inner airtight cap and including an opening/closing wing having a first latching step configured to be forcibly caught by the latching ribs and a second latching step configured to be caught by or released from the latching rim 14 formed on the outer circumferential surface of the opening in the container body, and an outer cap coupled to an outer portion of the push cap, and the

cap may be assembled into a unitary construction that is removed from or coupled to the container body as a single unit.

[0008] According to the present invention, the ascending/descending guide cap may include rotation guide blocks formed on an inner circumferential surface thereof and having inclined guide surfaces, and first guide recesses and second guide recesses having different latching depths from each other and alternately arranged, each of the first guide recesses and the second guide recesses being defined between the rotation guide blocks and the second guide recesses having latching steps therein, the knock member may include a rotation support member fitted into the ascending/descending guide cap such that an upper portion of the rotation support member is exposed outside through a through-hole in the ascending/descending guide cap, and a cam member elastically supported by the elastic member and coupled to the rotation support member so as to rotate relative to the rotation support member, the cam member and the rotation support member including first guide protrusions and second guide protrusions, respectively, and the first guide protrusions and the second guide protrusions having different latching lengths from each other, and, when the cap is in a state of being locked to the container body, the first guide protrusions of the cam member may be caught by the latching steps of the second guide recesses in the ascending/descending guide cap so as to prevent the push cap from ascending, and when the cap is unlocked from the container body, the cam member may be rotated in a predetermined direction by the rotation support member and the first guide protrusions may ascend along the first guide recesses in the ascending/descending guide cap together with the second guide protrusions of the rotation support member so as to allow the push cap to ascend.

[0009] According to the present invention, the container body may further include coupling protrusions formed on an outer circumferential surface of an upper end of the opening, the opening/closing operation units may further include coupling protrusions formed on surfaces thereof that face the outer circumferential surface of the upper end of the opening so as to mesh with the coupling protrusions of the container body, and when the cap is in a state of being locked to the container body, the container body or the cap may be prevented from being unintentionally rotated.

[0010] According to the present invention, the inner airtight cap may include at least one of a short airtight pipe for sealing an inner circumferential surface of an upper end of the opening in the container body in an airtight manner and an airtight ring for sealing a top surface of the opening in an airtight manner.

[0011] According to the present invention, the outer cap may include a cover ring fixedly coupled to an inner circumferential surface of a lower end thereof.

[0012] According to the present invention, the push cap may further include an attachment recess for receiving a name plate attached thereto, the attachment recess being formed on a top surface of a push portion of the push cap.

[0013] According to the present invention, the container body may be formed to have a double structure including outer and inner container bodies.

[0014] According to the present invention, the elastic member may be a compressive coil spring.

[Advantageous Effects]

[0015] According to the present invention, since the opening/closing operation of the cap is achieved in a one-touch manner, it is possible to open and close the container body more rapidly, easily and conveniently using such a one-touch cap, leading to remarkably improved convenience in use of the cosmetic container.

[Description of Drawings]

[0016]

FIG. 1 is a perspective view showing the assembled state of a cosmetic container according to the present invention;

FIG. 2 is an exploded perspective view of the cosmetic container according to the present invention;

FIG. 3 is an exploded perspective view of an ascending/descending guide cap and a knock member according to the present invention;

FIG. 4 is a side sectional view showing the locked state of the cosmetic container according to the present invention;

FIG. 5 is a side sectional view showing the unlocked state of the cosmetic container according to the present invention;

FIG. 6 is an enlarged sectional view of portion "A" in FIG. 4;

FIG. 7 is an enlarged sectional view of portion "B" in FIG. 5;

FIG. 8 is a bottom plan view of the ascending/descending guide cap according to the present invention;

FIG. 9 is a bottom plan view showing the state before the knock member ascends inside the ascending/descending guide cap according to the present invention;

FIG. 10 is a bottom plan view showing the state after the knock member ascends inside the ascending/descending guide cap according to the present invention; and

FIG. 11 is a side sectional view showing the state in which a cap according to the present invention is separated from a container body.

[Best Mode]

[0017] Hereinafter, a cosmetic container configured to

be opened and closed by operation of a cap in a one-touch manner according to the present invention will be described with reference to the accompanying drawings.

[0018] Referring to FIGS 1 to 10, a cosmetic container 100 configured to be opened and closed by operation of a cap in a one-touch manner according to the present invention comprises a container body 10, which has an accommodation space 11 formed therein to contain various forms of contents and is open in a certain direction, and a cap 20, which is operated to open and close the upper end of an opening 12 in the container body in a one-touch manner.

[0019] The container body 10 is provided with a latching rim 14, which protrudes outwards from the outer periphery of the upper end of the opening 12. Further, the container body is provided with coupling protrusions 16 arranged around the outer circumferential surface of the upper end of the opening, each being formed to have a saw-tooth-shaped cross-section, a triangular-shaped cross-section or the like and extending in the vertical direction.

[0020] Depending on the kind of contents, the container body 10 may be formed in a unitary construction, or, as shown in the drawings, may be formed to have a double structure including an outer container body 10a and an inner container body 10b.

[0021] In the case in which the container body 10 has a double structure including the outer and inner container bodies 10a and 10b, it is preferable for the inner container body to be securely fitted in the upper end of the outer container body so as to be maintained in an integrally coupled state unless the inner container body is intentionally removed from the outer container body.

[0022] Further, in the case in which the container body has a double structure including the outer and inner container bodies, the coupling protrusions 16, formed at the upper end of the opening 12 in the container body 10, may be, specifically, formed around the outer circumferential surface of the upper end of the inner container body 10b due to the coupling structure of the container body.

[0023] The cap 20, which is constructed as a single assembly so as to open and close the container body 10, includes an inner airtight cap 30, an ascending/descending guide cap 40, a knock member 50 disposed in the ascending/descending guide cap and elastically supported by an elastic member 60, a push cap 70 fixedly coupled to the knock member, an opening/closing operation unit 80, and an outer cap 90 coupled to the outer portion of the push cap in order to support the same, and all of these components are united into a single structure that is removed from and coupled to the container body 10 as a single unit.

[0024] The inner airtight cap 30 functions to maintain the upper end of the opening 12 in the container body 10 in an airtight state when the cap 20 is operated to close the container body 10, and includes a short airtight pipe 31, which extends downwards from the bottom surface of the inner airtight cap so as to be closely fitted in the inner circumferential surface of the upper end of the opening 12 in the container body 10, and an airtight ring 32, which is formed of an elastic material and is integrally attached to a marginal portion of the bottom surface of the inner airtight cap so as to be in close contact with the top surface of the opening in the container body in an airtight manner.

[0025] Further, the inner airtight cap 30 includes a short support pipe 33, which integrally extends from a central portion of the top surface of the inner airtight cap so as to be open in the upward direction, and one or more support ribs 34, which are equidistantly arranged around the short support pipe and each of which has a hinge recess 34a therein.

[0026] The ascending/descending guide cap 40 is fixedly coupled to the short support pipe 33 of the inner airtight cap 30. The ascending/descending guide cap has a hollow shape, which is open in a certain direction in order to guide unidirectional rotation and vertical movement of the knock member 50, which will be described later. The ascending/descending guide cap has a through-hole 41, which is formed at the central portion of the top surface of the ascending/descending guide cap so as to be open in the upward direction, a plurality of rotation guide blocks 42, which are equidistantly arranged along the inner circumferential surface of the through-hole and each of which is provided at the lower end thereof with an inclined guide surface 42a that is formed to be inclined in a certain direction, first guide recesses 43 and second guide recesses 44, each of which is defined between the rotation guide blocks and which are alternately arranged, as shown in FIG. 8, and latching steps 44a, each of which is formed at the lower portion of each of the second guide recesses.

[0027] The knock member 50 is disposed inside the ascending/descending guide cap 40 so as to be elastically supported by the elastic member 60.

[0028] The knock member 50 includes a cam member 51, which is elastically supported by the elastic member 60 from below, and a rotation support member 52, to which the cam member is coupled so as to rotate relative to the rotation support member. The cam member is provided with a plurality of first guide protrusions 51a on the outer circumferential surface of the lower end thereof, and the rotation support member is provided with a plurality of second guide protrusions 52a on the outer circumferential surface of the lower end thereof. Each of the first guide protrusions 51a formed at the cam member 51 is provided at the top surface thereof with a rotation guide surface 51b, which is inclined in a certain direction, and the rotation support member 52 is provided on the bottom surface thereof with a series of saw-teeth 52b, each of which is inclined at the same angle as the rotation guide surface 51b so as to mesh with the rotation guide surface.

[0029] The ascending/descending guide cap 40 and the knock member 50 function to limit the vertical movement of the push cap 70, which will be described later,

to an appropriate extent when the cap 20 is locked to and unlocked from the container body 10.

[0030] The first guide protrusions 51a formed at the cam member 51 and the second guide protrusions 52a formed at the rotation support member 52 may be formed to have different protruding lengths from each other.

[0031] That is, as shown in FIG. 10, the first guide protrusions 51a formed at the cam member 51 have a length that allows the first guide protrusions 51a to move vertically only along the first guide recesses 43 in the ascending/descending guide cap 40, and the second guide protrusions 52a formed at the rotation support member 52 have a length that prevents the second guide protrusions 52a from being caught by the latching steps 44a of the second guide recesses 44 and allows the second guide protrusions 52a to move vertically along the first guide recesses 43 and the second guide recesses 44.

[0032] Therefore, as shown in FIG. 10, the first guide protrusions 51a formed at the cam member 51 move vertically together with the second guide protrusions 52a of the rotation support member 52 only along the first guide recesses 43, and, when the first guide protrusions 51a of the cam member 51 are located in the second guide recesses 44, as shown in FIG. 9, the first guide protrusions 51a are caught by the lower ends 44a of the second guide recesses 44 and are thus prevented from moving vertically, and only the second guide protrusions 52a formed at the rotation support member 52 move vertically along the second guide recesses 44.

[0033] The elastic member 60, which elastically supports the knock member 50, applies elastic force to the knock member so that the knock member is constantly biased upwards and is preferably embodied as a compressive coil spring; however, the elastic member may be formed in various other configurations and of various materials as long as the function of elastically supporting the knock member is achieved.

[0034] The push cap 70 covers the upper portion of the inner airtight cap 30. The push cap is formed to be open in a certain direction, and includes a push portion 71, which has a curved surface that ascends to an apex and which is provided on the bottom surface thereof with a short coupling pipe 73 that extends downwards, and a lateral portion 72, which extends downwards from the periphery of the push portion. Therefore, the push cap 70 is coupled to the knock member 50 in a manner such that the short coupling pipe 73 is integrally coupled to the rotation support member 52 of the knock member, with the result that the push cap and the knock member are pressed together.

[0035] The push cap 70 is provided with latching ribs 74, which are equidistantly arranged on the inner circumferential surface of the lateral portion 72. The latching ribs 74, as shown in the drawings, may preferably be provided in a plural number, spaced a predetermined distance apart from each other; however, the latching ribs may alternatively be formed in a unitary configuration.

[0036] The push cap 70 has a concave recess 71a formed in the top surface of the push portion 71, to which a name plate 75 for showing a company logo, a product name, an advertising phrase, etc. is attached.

[0037] Now, the opening/closing operation unit 80 will be described. The opening/closing operation unit may be provided in a plural number so as to be separate from one another. The opening/closing operation unit includes a hinge pin 82, which is provided at one end portion of a connection portion 81 so as to be fitted into the hinge recess 34a formed in each of the support ribs 34 of the inner airtight cap 30, and an opening/closing wing 83, which is bent from the opposite end of the connection portion. The opening/closing wing includes a first latching step 83a, which is formed on the upper portion of the outer circumferential surface of the opening/closing wing so as to be forcibly caught by or released from the latching ribs 74 formed on the inner circumferential surface of the lateral portion 72 of the push cap 70, and a second latching step 83b, which is formed on the inner circumferential surface of the lower end of the opening/closing wing so as to be forcibly caught by or released from the latching rim 14 of the container body 10.

[0038] The opening/closing operation unit 80 further includes coupling protrusions 84, which are formed on the inner circumferential surface of the opening/closing wing 83 of the opening/closing operation unit 80 so as to mate with the coupling protrusions 16 formed on the outer circumferential surface of the upper end of the opening 12 in the container body 10.

[0039] Due to the engagement between the coupling protrusions 84 formed at the opening/closing wing 83 of the opening/closing operation unit 80 and the coupling protrusions 16 formed on the outer circumferential surface of the upper end of the opening in the container body 10, the cap and the container body 10 may be assembled such that unintentional rotating manipulation cannot be performed.

[0040] The outer cap 90 is coupled to the outer portion of the push cap 70 so that the vertical movement of the push cap can be achieved. The outer cap also functions as a portion that is grabbed with the hand when the cap 20 is finally removed from the container body. It is preferable for the outer cap, which is assembled with the push cap, to be formed such that the lower end portion thereof extends to such an extent that it covers a portion near the lower end of the container body 10, as shown in FIG. 4.

[0041] Further, it is preferable for the outer cap, which covers the outer periphery of the push cap, to be formed to support the push cap so that the vertical movement of the push cap can be achieved.

[0042] The outer cap 90 may further include a cover ring 91, which is fixedly coupled to the inner periphery of the lower end portion of the outer cap.

[0043] The cover ring 91 functions to prevent the outer cap 90, to which the push cap 70 is coupled so as to move vertically, from moving further downwards than necessary, and also functions as a cover for preventing

the opening/closing operation unit 80, disposed inside the push cap, from being seen from outside.

[0044] Therefore, the cover ring 91 is removed from or coupled to the container body 10 together with the outer cap 90.

[0045] The process of assembling the cosmetic container 100 configured to be opened and closed by operation of a cap in a one-touch manner according to the present invention having the above construction will now be described with reference to FIG. 3.

[0046] The lower end of the inner container body 10b is inserted into the outer container body 10a such that the upper end of the inner container body is forcibly secured to the outer container body, whereby the container body 10 is formed as a unitary body and the inner container body is prevented from being separated from the outer container body unless the inner container body is intentionally removed from the outer container body. Of course, if the container body does not have a double structure, this process of assembling the inner container body with the outer container body is omitted.

[0047] Next, the process of assembling the cap 20 includes a step of fitting the ascending/descending guide cap 40, in which the knock member 50 is elastically supported by the elastic member 60, into the short support pipe 33 formed on the top surface of the inner airtight cap 30. Subsequently, the opening/closing operation units 80 are coupled to the respective support ribs 34 of the inner airtight cap 30. Then, the short coupling pipe 73 of the push cap 70 is fixedly coupled to the rotation support member 52 of the knock member 50, which is exposed outside through the through-hole 41 in the ascending/descending guide cap 40. Finally, the outer cap 90 is coupled to the outer periphery of the push cap 70, and the cover ring 91 is integrally secured to the inner circumferential surface of the lower end of the outer cap.

[0048] The above-described process of assembling the cap 20 is merely exemplary, and the assembly method is not limited thereto, but may be modified in various manners.

[0049] As a result, the cap 20 is assembled into a unitary construction, which is removed from or coupled to the container body 10 as a single unit.

[0050] Next, the operation of the cosmetic container 100 configured to be opened and closed by the operation of a cap in a one-touch manner according to the present invention will be described.

[0051] FIG. 4 shows the state in which the cap 20 is locked to the container body 10, in which the push cap 70 is maintained in the state of being pressed downwards with respect to the outer cap 90. As a result of the push cap being in the state of being pressed downwards, the knock member 50 is also maintained in the state of being pressed and moved downwards, and the elastic member 60, which supports the knock member, is maintained in the state of being forcibly compressed. The first guide protrusions 51a of the cam member 51 of the knock member 50 are maintained in the state of being caught by the latching steps 44a formed at the lower ends of the second guide recesses 44 in the ascending/descending guide cap 40, and accordingly the push cap 70, which is maintained in the downwardly pressed state, does not unintentionally ascend.

[0052] In the downwardly pressed state of the push cap 70, as described above, the rotation guide surfaces 51b formed at the first guide protrusions 51a of the cam member 51 and the saw-teeth 52b formed on the bottom surface of the rotation support member 52 are not meshed with each other.

[0053] Further, the hinge pin 82 of the opening/closing operation unit 80 is fitted into the hinge recess 34a formed in each of the support ribs 34a of the inner airtight cap 30 so as not to be separated therefrom, the outer periphery of the lower end of the opening/closing wing 83 is forcibly pressed by the latching ribs 74 formed on the inner circumferential surface of the lateral portion 72 of the push cap 70, and the second latching step 83b, formed on the inner circumferential surface of the lower end of the opening/closing wing, is forcibly caught by the latching rim 14 formed on the outer circumferential surface of the opening 12 in the container body 10.

[0054] As a result of the opening/closing wing 83 of the opening/closing operation unit 80 being forcibly pressed by the latching ribs 74 of the push cap 70 and of the second latching step 83b formed on the inner circumferential surface of the lower end of the opening/closing wing 83 being forcibly caught by the latching rim 14 formed on the outer circumferential surface of the opening 12 in the container body 10, the cap 20 is stably maintained in the state of closing the container body 10.

[0055] As shown in FIG. 4, in the state in which the container body 10 is closed by the cap 20, the opening/closing wing 83 of the opening/closing operation unit 80 is forcibly pressed toward the latching rim 14 of the container body by the latching ribs 74, and the coupling protrusions 84 formed on the inner circumferential surface of the opening/closing wing mate with the coupling protrusions 16 formed on the outer circumferential surface of the opening in the container body, whereby the container body 10 or the cap 20 is prevented from being rotated even if rotating force in either direction is applied thereto.

[0056] As a result of the short airtight pipe 31 and the airtight ring 32 provided at the inner airtight cap 30 being coupled to the inner circumferential surface of the upper end and the top surface of the opening 12 in the container body in an airtight manner, the accommodation space 11 in the container body 10, in which contents are contained, is sealed in an airtight manner, thereby preventing the contents from leaking while the cosmetic container is carried or stored.

[0057] In this state, when the cap 20 is intended to be removed from the container body in order to use the contents in the accommodation space 11 in the container body 10, the push portion 71 of the push cap 70 is first pressed in the state shown in FIG. 4, with the result that

the first guide protrusions 51a of the cam member 51, which have been caught by the latching steps 44a of the ascending/descending guide cap 40, are separated therefrom. Subsequently, the rotation guide surfaces 51b of the first guide protrusions 51a of the cam member 51 and the saw-teeth 52b of the rotation support member 52, which have been in the state of not being meshed with each other, are engaged with each other, the cam member 51 is forcibly rotated in a certain direction, and at the same time, the rotation guide surfaces 51b of the first guide protrusions 51a of the cam member 51 are rapidly rotated along the inclined guide surfaces 42a of the rotation guide blocks 42, whereby the first guide protrusions 51a are moved to the position of the first guide recesses 43 in the ascending/descending guide cap 40.

[0058] Meanwhile, although the push cap 70 is pressed once, as described above, the opening/closing wing 83 of the opening/closing operation unit 80 is constantly maintained in the state of being pressed by the latching ribs 74 formed on the inner circumferential surface of the lateral portion 72 of the push cap, whereby it is impossible to separate the cap 20 from the container body 10.

[0059] When the pressing force applied to the push cap 70 is eliminated in the state in which the first guide protrusions 51a of the cam member 51 are moved to the position of the first guide recesses 43 in the ascending/descending guide cap 40, the knock member 50 and the push cap 70 ascend automatically due to the restoring force of the elastic member 60, which has been maintained in the compressed state.

[0060] That is, the ascending prevention state of the push cap 70 is released by the knock member 50, and, as shown in FIG. 4, the second guide protrusions 52a formed at the rotation support member 52 of the knock member 50 also ascend to the uppermost latching position of the first guide recesses 43 in the ascending/descending guide cap 40. With the ascent of the push cap 70, the latching ribs 74 formed at the push cap 70 also ascend and are forcibly brought into surface contact with the first latching step 83a formed on the outer circumferential surface of the opening/closing wing 83 of the opening/closing operation unit 80. As a result of the push cap 70 ascending in the state in which the latching ribs 74 are caught by the first latching step 83a, the lower end portion of the opening/closing wing 83 is spread outwards about the hinge pin 82 fitted into the hinge recess 34a in the support rib 34, and, at the same time, the second latching step 83b formed on the inner circumferential surface of the opening/closing wing is forcibly separated from the latching rim 14 formed on the outer circumferential surface of the opening 12 in the container body 10, whereby the locking force of the cap is eliminated.

[0061] In other words, the locking force of the cap 20 to the container body 10 is eliminated in a manner such that the opening/closing wing 83 of the opening/closing operation unit 80 is spread outwards in response to the ascent of the push cap 70. In this state, when the outer cap 90 is grabbed and lifted up, as shown in FIG. 11, it is possible to remove the cap 20 from the container body 10 and to open the accommodation space 11 in the container body, thereby allowing the contents in the accommodation space to be used.

[0062] Even if the cap 20 is completely removed from the container body 10, since the push cap 70 is maintained in the ascending state by the elastic member 60, as shown in FIG. 11, the opening/closing wing 83 of the opening/closing operation unit 80 is maintained in the state in which the lower end thereof is spread outwards and opened.

[0063] On the other hand, when the cap 20 is intended to be coupled again to the container body 10 after the use of the contents is finished, as shown in FIG. 5, the cap 20 is placed directly above the opening 12 in the container body 10 from the state shown in FIG. 11, the push portion 71 of the push cap 70 is pressed again so that the push cap 70 and the knock member 50 descend while compressing the elastic member 60, and, at the same time, the first guide protrusions 51a of the cam member 51, which descend along the first guide recesses 43 in the ascending/descending guide cap 40, mesh with the saw-teeth 52b of the rotation support member 52 and are rotated to the position of the second guide recesses 44 in the ascending/descending guide cap 40 along the inclined guide surfaces 42a of the rotation guide blocks 42 and are finally caught by the latching steps 44a.

[0064] The lower end portion of the opening/closing wing 83 of the opening/closing operation unit 80 is forcibly pressed inwards by the latching ribs 74 formed on the inner circumferential surface of the lateral portion 72 of the push cap 70, and the second latching step 83b is forcibly coupled to the latching rim 14 of the container body 10. Through the above series of processes, the cap is coupled again to the container body 10, and the accommodation space 11 in the container body is sealed in an airtight manner by the inner airtight cap 30.

[0065] As described above, according to the present invention, the cap 20 can be conveniently removed from or coupled to the container body 10 merely by touching the push cap 70, the vertical movement of which is controlled by the ascending/descending guide cap 40 and the knock member 50 elastically supported by the elastic member 60 inside the ascending/descending guide cap, so that one or more opening/closing operation units 80, each having a portion hingedly coupled to the support ribs 34, perform the opening/closing operation so as to be caught by or released from the latching rim 14 of the container body 10.

[0066] Although the preferred embodiments of the present invention have been disclosed for illustrative purposes, those skilled in the art will appreciate that various modifications, additions and substitutions are possible, without departing from the scope and spirit of the invention as disclosed in the accompanying claims.

Claims

1. A cosmetic container configured to be opened and closed by operation of a cap in one-touch manner, comprising:

   a container body 10 including an accommodation space 11 for containing contents and a latching rim 14 formed on an outer circumferential surface of an opening 12; and
   a cap 20 configured to be unlocked from or locked to the container body in one-touch manner,
   wherein the cap 20 is removed from or coupled to the container body 10 by touching a push cap 70, vertical movement of the push cap being controlled by an ascending/descending guide cap 40 and a knock member 50 elastically supported by an elastic member 60 inside the ascending/descending guide cap, so that one or more opening/closing operation units 80, each having a hinge-coupling portion, perform an opening/closing operation so as to be caught by or released from the latching rim 14 of the container body 10.

2. The cosmetic container according to claim 1, wherein the cap 20 includes an inner airtight cap 30 for sealing an upper end of the opening in the container body 10 in an airtight manner, the ascending/descending guide cap 40 fixedly coupled to an upper portion of the inner airtight cap, the knock member 50 elastically supported by the elastic member 60 inside the ascending/descending guide cap, the push cap 70 fixedly coupled to the knock member and including latching ribs 74, the one or more opening/closing operation units 80 arranged in the push cap so as to be separate from one another, each having a portion hingedly coupled to support ribs 34 of the inner airtight cap and including an opening/closing wing 83 having a first latching step 83a configured to be forcibly caught by the latching ribs and a second latching step 83b configured to be caught by or released from the latching rim 14 formed on the outer circumferential surface of the opening in the container body, and an outer cap 90 coupled to an outer portion of the push cap, and wherein the cap is assembled into a unitary construction that is removed from or coupled to the container body 10 as a single unit.

3. The cosmetic container according to claim 1 or 2, wherein the ascending/descending guide cap 40 includes rotation guide blocks 42 formed on an inner circumferential surface thereof and having inclined guide surfaces 42a, and first guide recesses 43 and second guide recesses 44 having different latching depths from each other and alternately arranged, each of the first guide recesses and the second guide recesses being defined between the rotation guide blocks and the second guide recesses having latching steps 44a therein,
   the knock member 50 includes a rotation support member 52 fitted into the ascending/descending guide cap 40 such that an upper portion of the rotation support member is exposed outside through a through-hole 41 in the ascending/descending guide cap 40, and a cam member 51 elastically supported by the elastic member 60 and coupled to the rotation support member so as to rotate relative to the rotation support member, the cam member and the rotation support member including first guide protrusions 51a and second guide protrusions 52a, respectively, and the first guide protrusions 51a and the second guide protrusions 52a having different latching lengths from each other, and
   when the cap 20 is in a state of being locked to the container body 10, the first guide protrusions 51a of the cam member 51 are caught by the latching steps 44a of the second guide recesses 44 in the ascending/descending guide cap 40 so as to prevent the push cap 70 from ascending, and when the cap is unlocked from the container body, the cam member 51 is rotated in a predetermined direction by the rotation support member 52 and the first guide protrusions 51a ascend along the first guide recesses 43 in the ascending/descending guide cap together with the second guide protrusions 52a of the rotation support member so as to allow the push cap 70 to ascend.

4. The cosmetic container according to claim 1, wherein the container body 10 further includes coupling protrusions 16 formed on an outer circumferential surface of an upper end of the opening 12, the opening/closing operation units 80 further include coupling protrusions 84 formed on surfaces thereof that face the outer circumferential surface of the upper end of the opening so as to mesh with the coupling protrusions 16 of the container body, and when the cap 20 is in a state of being locked to the container body 10, the coupling protrusions 16 mesh with the coupling protrusions 84 so as to prevent the container body 10 or the cap 20 from being unintentionally rotated.

5. The cosmetic container according to claim 2, wherein the inner airtight cap 30 includes at least one of a short airtight pipe 31 for sealing an inner circumferential surface of an upper end of the opening 12 in the container body 10 in an airtight manner and an airtight ring 32 for sealing a top surface of the opening 12 in an airtight manner.

6. The cosmetic container according to claim 2, wherein the outer cap 90 includes a cover ring 91 fixedly

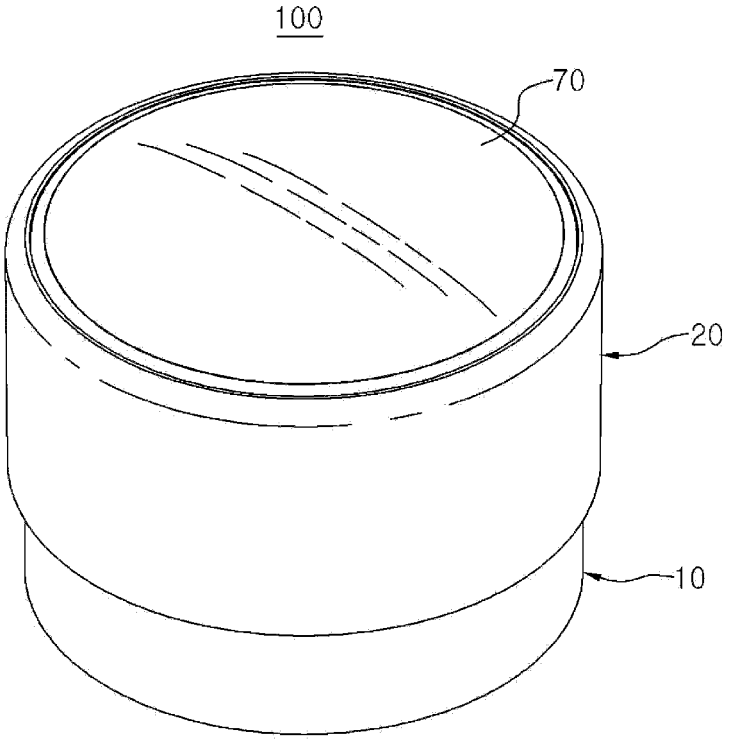
coupled to an inner circumferential surface of a lower end thereof.

7. The cosmetic container according to claim 1 or 2, wherein the push cap 70 further includes an attachment recess 71a for receiving a name plate 75 attached thereto, the attachment recess being formed on a top surface of a push portion 71 of the push cap 70.

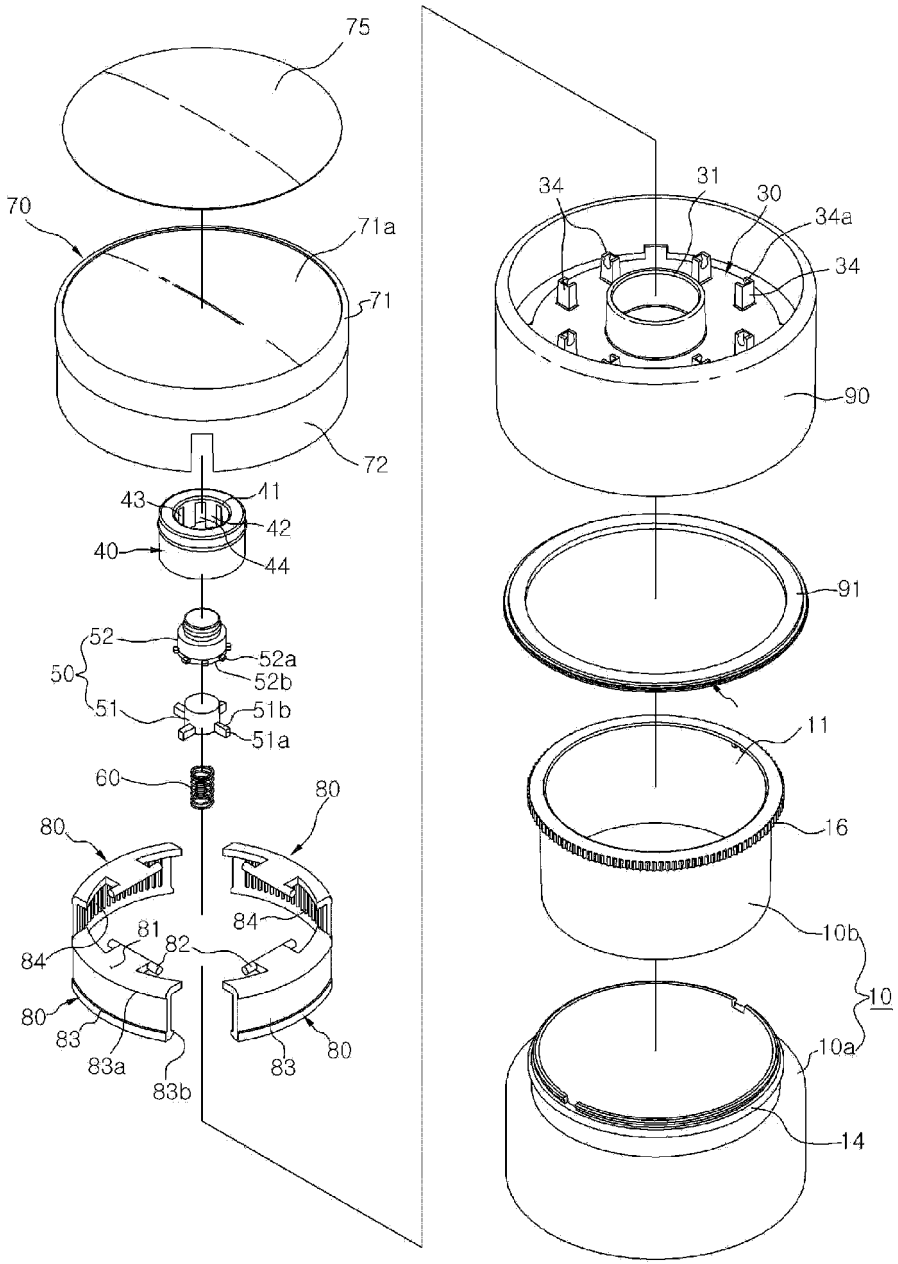
8. The cosmetic container according to claim 1, wherein the container body 10 is formed to have a double structure including outer and inner container bodies 10a and 10b.

9. The cosmetic container according to claim 1 or 2, wherein the elastic member 60 is a compressive coil spring.

[FIG. 1]



[FIG. 2]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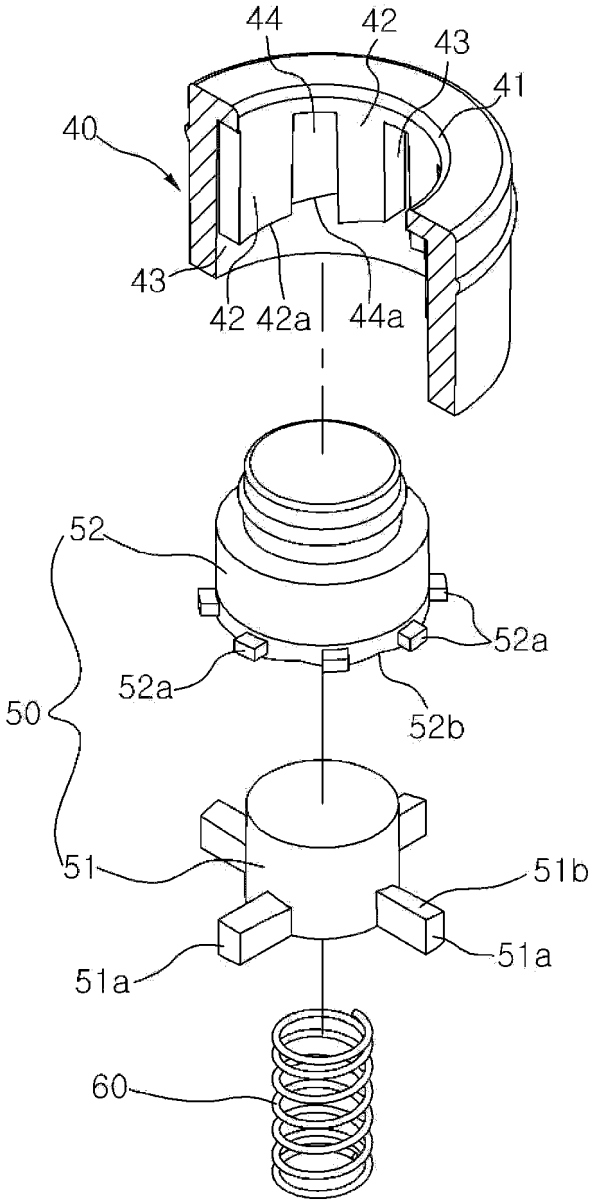
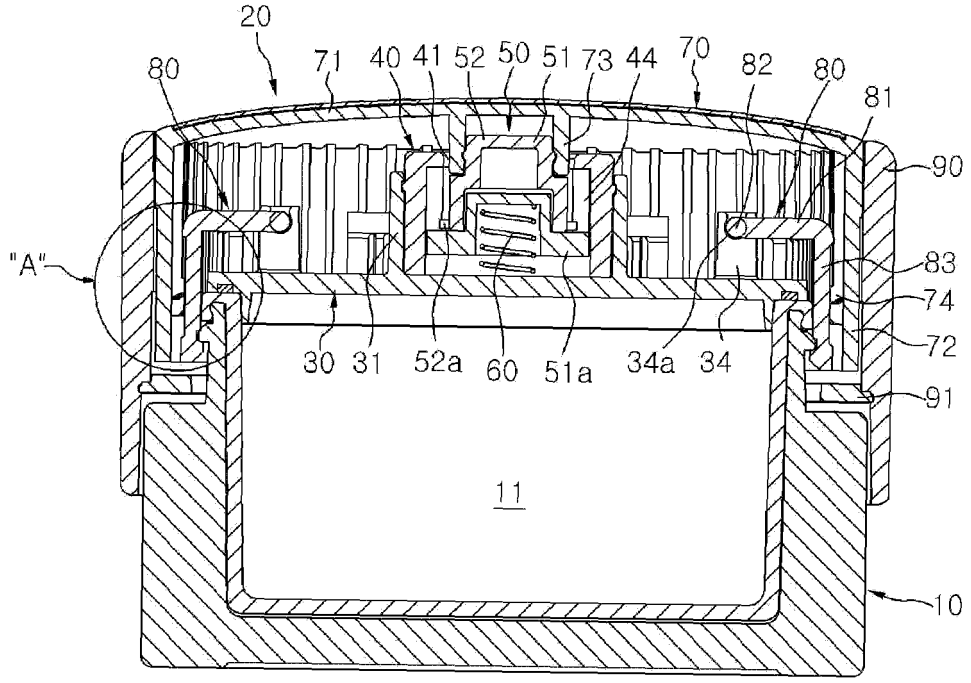
[FIG. 3]



[FIG. 4]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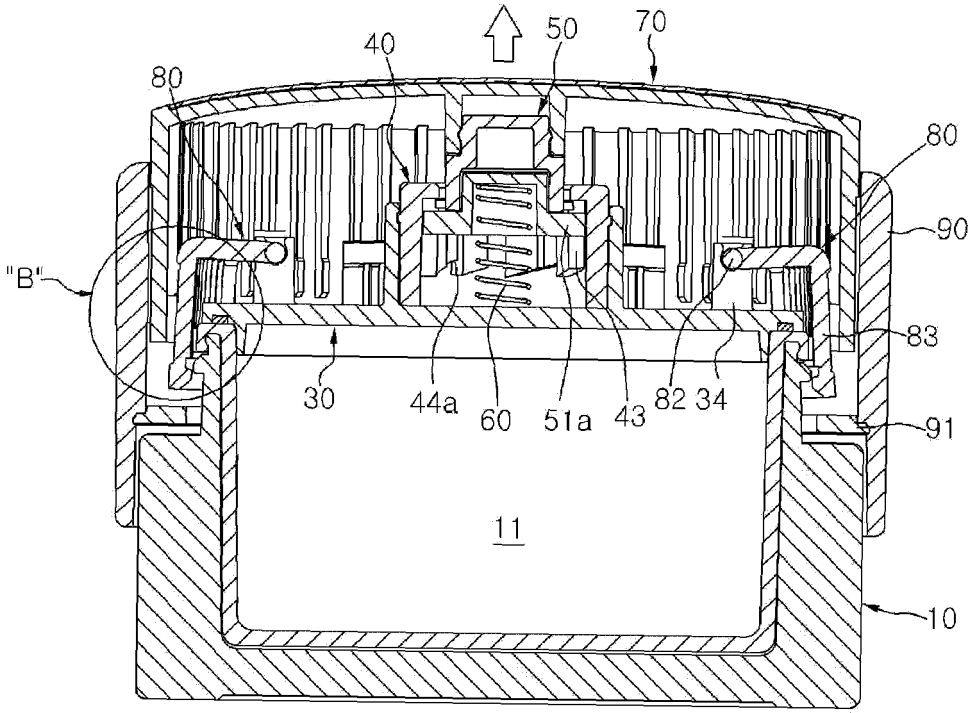
[FIG. 5]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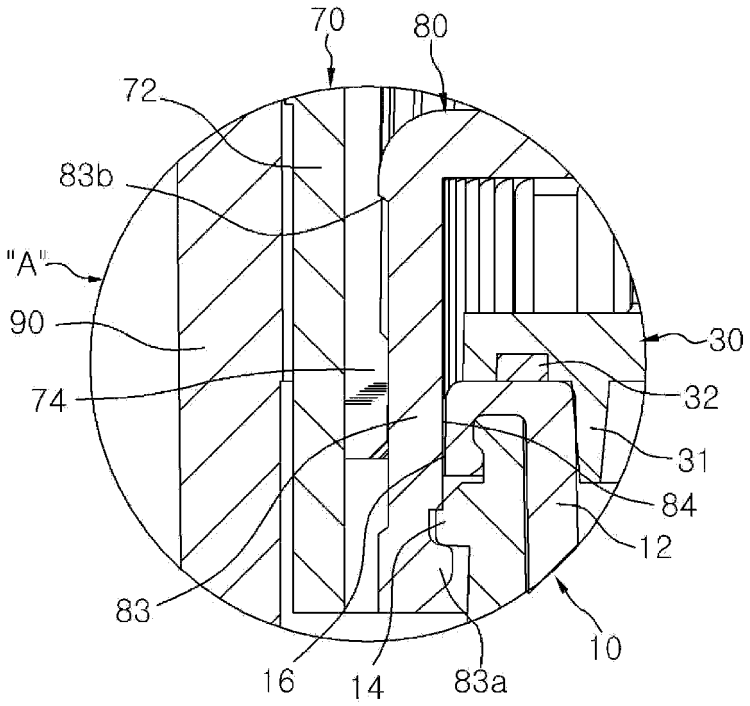
[FIG. 6]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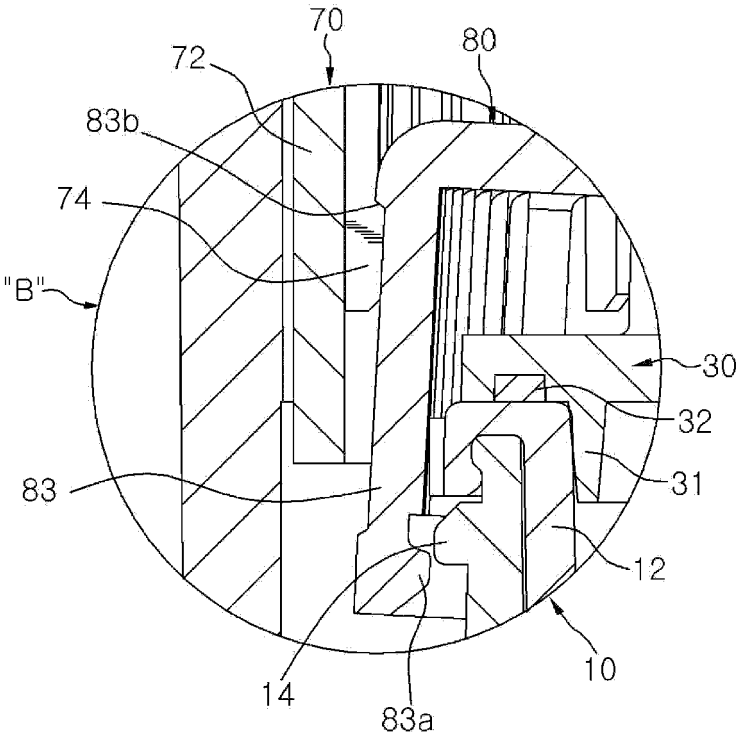
[FIG. 7]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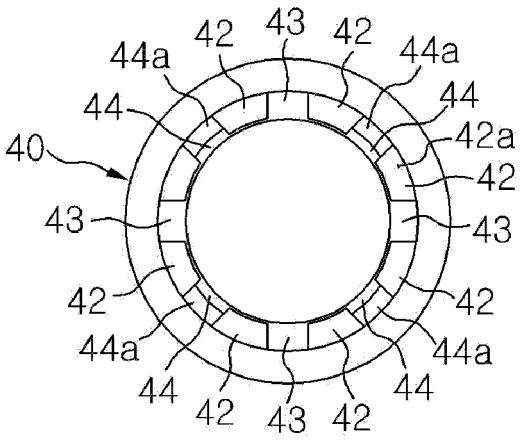
[FIG. 8]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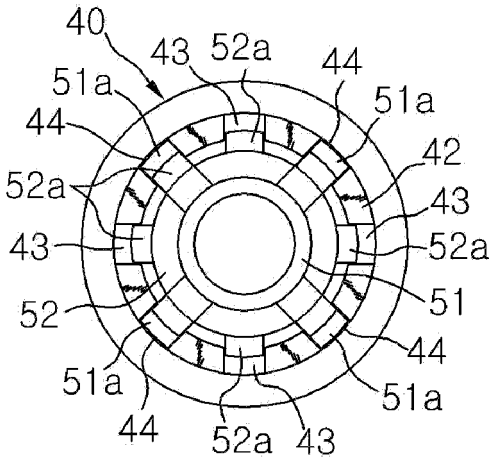
[FIG. 9]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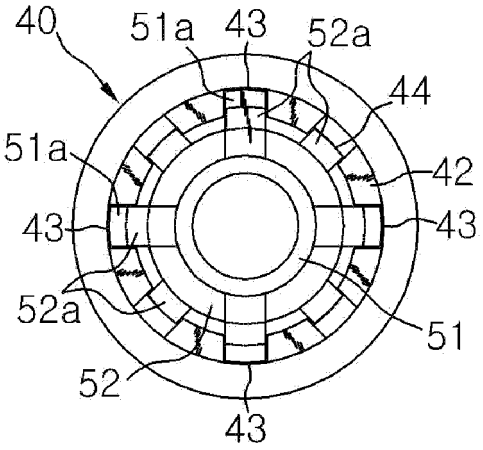
[FIG. 10]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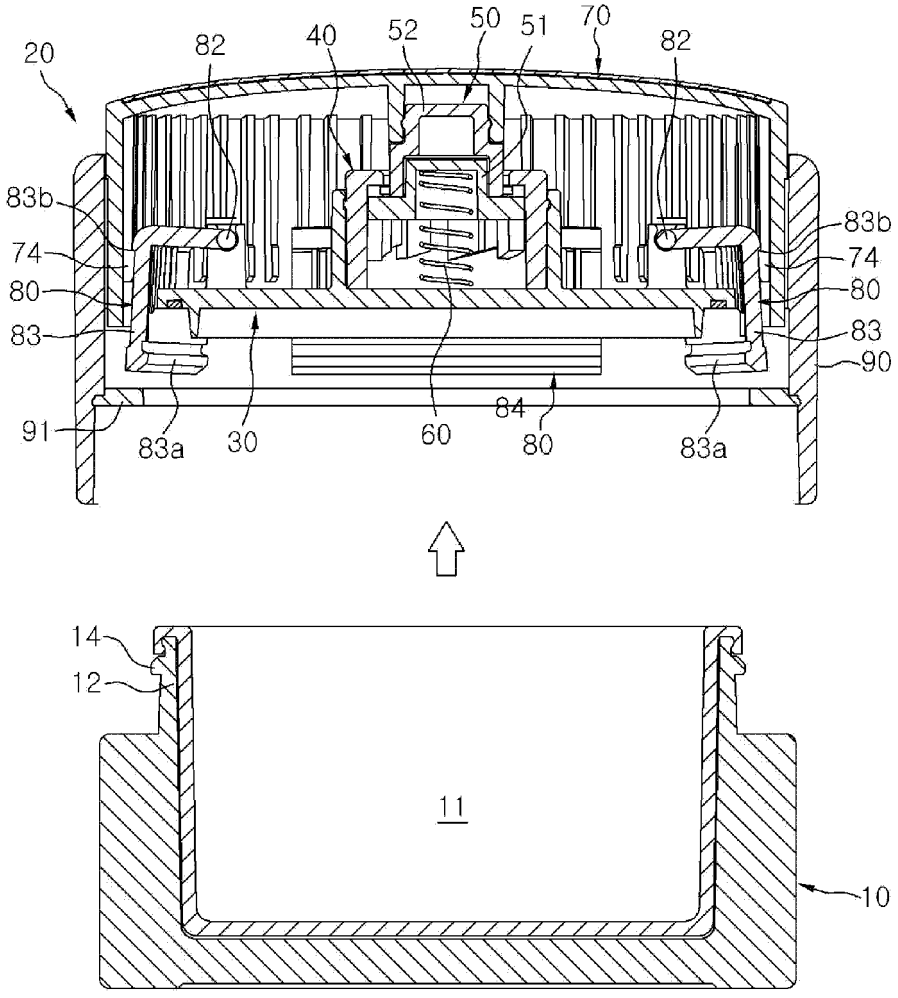
[FIG. 11]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INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2016/013856

A. CLASSIFICATION OF SUBJECT MATTER

A45D 34/00(2006.01)i, A45D 40/00(2006.01)i, B65D 41/16(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A45D 34/00; B65D 50/06; B65D 83/76; B65D 8/00; B65D 50/04; B65D 25/04; B65D 50/02; A45D 40/00; B65D 41/16

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Utility models and applications for Utility models: IPC as above
Japanese Utility models and applications for Utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS (KIPO internal) & Keywords: cosmetic container, cap, one touch, lock, elastic member, opening and closing

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 20-0437214 Y1 (AMOREPACIFIC CORPORATION) 13 November 2007 See claims 1-3.	1-9
A	KR 20-0420228 Y1 (TAEPYEONGYANG CORPORATION) 03 July 2006 See the entire document.	1-9
A	KR 20-0442230 Y1 (AMOREPACIFIC CORPORATION) 20 October 2008 See the entire document.	1-9
A	KR 10-2016-0015642 A (PARK, Tae Young) 15 February 2016 See the entire document.	1-9

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
08 AUGUST 2017 (08.08.2017)	**10 AUGUST 2017 (10.08.2017)**
Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Seonsa-ro, Daejeon 302-701, Republic of Korea Facsimile No. +82-42-481-8578	Authorized officer Telephone No.

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR2016/013856

Patent document cited in search report	Publication date	Patent family member	Publication date
KR 20-0437214 Y1	13/11/2007	NONE	
KR 20-0420228 Y1	03/07/2006	NONE	
KR 20-0442230 Y1	20/10/2008	CN 101631728 A WO 2008-072833 A1	20/01/2010 19/06/2008
KR 10-2016-0015642 A	15/02/2016	NONE	

Form PCT/ISA/210 (patent family annex) (January 2015)

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- KR 200437214 Y1 **[0004]**