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(71) Applicant: **GEKA GmbH**
91572 Bechhofen (DE)

(72) Inventor: **Weigel, Friedrich**
91749 Wittelshofen (DE)

(74) Representative: **Misselhorn, Hein-Martin**
Patent- und Rechtsanwalt
Am Stein 10
85049 Ingolstadt (DE)

(54) **COSMETICS UNIT WITH INNER WALL WIPER**

(57) A cosmetic unit (1) comprising a container (2) intended to receive a cosmetic, a dispensing opening (5), an ap-plicator (6) for dispensing cosmetic from the container (2) through the dispensing opening (5) thereof, and a wiper (9) for wiping off cosmetic adhering to the appli-cator in excess of its intended loading amount, charac-terised in that a rotatably mounted container inner wall wiper (10) is held in the interior of the container (2), which comes into contact with the applicator (6) in the course of its insertion into the container, in such a way that the container inner wall wiper (10) follows a future rotational movement of the applicator (6), and wherein the container inner wall wiper (10) is designed in such a way that - at least after partial emptying of the container (6) - in the course of this rotational movement it conveys cosmetic from the wall region of the container (2) in the direction towards the applicator (6) .

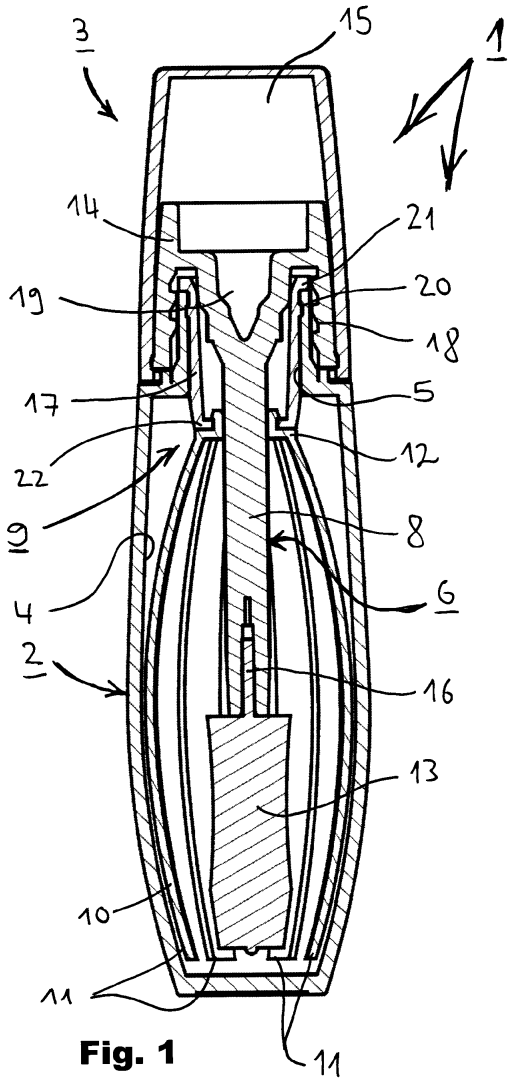

Fig. 1

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Description

[0001] The invention relates to a cosmetic unit comprising a container, an applicator and a wiper according to the generic term of claim 1.

TECHNICAL BACKGROUND

[0002] Cosmetic units are used for storing, transporting and applying make-up or care products. The various products to be applied are hereinafter referred to as "cosmetic" or "make-up". To apply the cosmetic, the bristles of the applicator are wetted with make-up. The make-up is then applied to the desired area using the bristles. The bristles are wetted by inserting the applicator with its end carrying the bristles into a container filled with cosmetic.

[0003] To prevent an excessive amount of cosmetic from adhering to the applicator, a wiper is regularly provided on the container filled with cosmetic. The bristles and/or the handle of the applicator are guided along this wiper as they are withdrawn from the container. This prevents an uncontrolled or uneven application of cosmetic to the desired area. If the applicator is designed as an eyelash brush, for example, an unwanted sticking or clumping of the eyelashes can thus be prevented.

STATE OF THE ART

[0004] Typically, containers have a circular opening, usually delimited by a bottle neck, through which the applicator is inserted into the container for wetting it with cosmetic. The diameter of this opening is usually significantly smaller than the largest diameter of the container.

[0005] This design results from practical reasons. The opening of the container is usually surrounded by an external thread onto which the lid (also called sealing cap) of the container is screwed. If the opening of the container had the same diameter as the container at its widest point, the overall diameter of the cosmetic unit would be significantly increased when closed due to the outer diameter and the lid screwed onto it. However, since cosmetic units are often carried in small handbags or luggage in everyday life, it is desirable for the cosmetic unit to be as slim as possible. It is true that the width of the cosmetic unit could be reduced by providing an internal thread at the container opening instead of an external thread. However, such a thread would quickly become contaminated due to the cosmetic in the container and would therefore possibly be very difficult to operate.

[0006] Nevertheless, in order to create a container with the largest possible total volume, such containers are typically relatively long in relation to their width.

[0007] When the applicator is now inserted into the container, the combination of the relatively narrow container opening and the relatively elongated design of the container means that the bristle trim of the applicator can only be moved to the inner container wall to a limited extent. However, the cosmetic to be applied is often a relatively viscous mass. As a result, when the applicator is inserted into the container, cosmetic is only removed from the central area of the container.

[0008] The applicator, however, with its bristle trim does not reach the cosmetic deposited in the wall area of the container. As a result, 10% or more of the cosmetic contained in the container with cosmetic is inaccessible to the user. This not only leads to dissatisfaction on the part of the purchaser of the cosmetic unit, but also represents a handling of resources which is no longer in line with modern consumer perception.

THE PROBLEM UNDERLYING THE INVENTION

[0009] In view of the above, it is the object of the invention to provide a cosmetic unit by means of which the cosmetic mass contained in the container can be used as fully as possible.

THE SOLUTION ACCORDING TO THE INVENTION

[0010] According to the invention, this problem is solved with the features of the main claim directed to the cosmetic unit.

[0011] Accordingly, the solution to the problem is provided by a cosmetic unit comprising a container intended to receive a cosmetic, a dispensing opening and an applicator for dispensing cosmetic from the container through the dispensing opening thereof. Moreover, the cosmetic unit comprises a wiper for wiping off cosmetic adhering to the applicator and forming an excess of its intended loading amount.

[0012] The cosmetic unit is characterized in that - in addition - a rotatably mounted container inner wall wiper is held inside the container. The container inner wall wiper comes into contact with the applicator in the course of its insertion into the container in such a way that the container inner wall wiper follows a future rotational movement of the applicator. In this case, the container inner wall wiper is designed in such a way that - at least after partial emptying of the container - it conveys cosmetic from the wall region of the container in the direction towards the applicator in the course of this rotary movement.

[0013] The rotational movement of the container inner wall wiper generates a flow or a kind of movement which conveys the cosmetic deposited in the wall area of the container in the direction of the applicator. Alternatively, the container inner wall wiper can be designed in such a way that during the rotational movement it removes the cosmetic deposited in the wall region of the container and this is finally moved in the direction of the applicator as a result of gravity.

[0014] The container inner wall wiper is therefore used in particular when the container has been emptied to such an extent that there is no or only a small amount of cosmetic in the area of the container in which the applicator is inserted. It therefore ensures that the entire or at least

almost the entire volume of the container can be used.

[0015] In order to prevent the applicator or its bristles from being fed out of the interior of the container with an excessive amount of cosmetic, the cosmetic unit is also provided with a wiper, i.e. a wiper for wiping the applicator. The wiper thereby ideally wipes off excessive cosmetic from the handle of the applicator as well as from the bristle trim. On the one hand, this prevents accidental application of cosmetic to an unwanted area with the handle. In addition, clumping of the cosmetic is prevented when it is applied to the desired area by means of the bristles of the applicator.

[0016] The term "cosmetic unit" preferably, but not exclusively, refers to a combination of an eyelash brush and a container for mascara into which the eyelash brush is immersed and an associated lid. Thus, the term cosmetic unit may also refer to products to be applied other than makeup, such as medical products.

[0017] The term "applicator" basically refers to an element with which the cosmetic contained in the container of the cosmetic unit can be applied to the desired area. Preferably, an "applicator" is understood to mean a general use brush or an eyelash brush comprising a handle, a bristle carrier with bristle trim and a handle.

[0018] The "intended loading amount" is when the bristles of the applicator or the applicator are wetted with cosmetic in such a way that the application of the cosmetic to the desired area can be carried out as intended. In particular, this means that the applicator or its bristles do not carry so much cosmetic that it drips, runs or falls off the applicator when the applicator is pulled out of the container.

[0019] A "rotatable mounting" in the sense of the above-mentioned mounting of the container inner wall wiper is understood to be a mounting which allows a rotational movement of the container inner wall wiper about its longitudinal axis, or - if the longitudinal axis of the container inner wall wiper does not coincide with the longitudinal axis of the applicator inserted into the container - about the longitudinal axis of the applicator.

[0020] The term "wall area" preferably means the entire area of the container between its inner wall and the bristles of the applicator fully inserted into the container. However, this does not mean that after use of the container inner wall wiper the inner wall of the container is completely free of cosmetic adhering thereto. Even if a thin film or coating of cosmetic remains on the inner wall of the container after use of the container inner wall wiper, the container inner wall wiper has wiped/removed cosmetic from the "wall area" in this sense.

PREFERENTIAL DESIGN OPTIONS

[0021] There are a number of ways in which the invention can be configured to further improve its effectiveness or utility.

[0022] Thus, it is particularly preferred that the container inner wall wiper is rotatable and usually mounted directly on the scraper. Preferably, the container inner wall wiper is mounted at the end of the wiper provided for the applicator where the said end is pointing towards the interior of the container.

[0023] The wiper for the applicator is ideally arranged in the region of the opening of the container, through which the applicator is guided into or out of the container. Ideally, in the assembled state, the applicator's wiper projects into or adjoins the interior of the container containing the cosmetic.

[0024] If the container inner wall wiper is now borne at the end of the applicator's wiper where it is a pointing towards the interior of the container, the consequence is that the container inner wall wiper can be used along the entire interior of the container. The only prerequisite for this is a sufficient length of the container inner wall wiper.

[0025] In addition, the container inner wall wiper can then be attached to the wiper (for the applicator) in the unassembled state of the applicator's wiper. Subsequently, the wiper and the container inner wall wiper can then be mounted together in or on the container. This facilitates the assembly of the container inner wall wiper considerably.

[0026] In principle, it would also be conceivable to mount the container inner wall wiper more or less loosely in the interior of the container. In order to use the container inner wall wiper as intended, the applicator would then only have to be coupled to the container inner wall wiper as intended when it is inserted into the container. However, if the container inner wall wiper is rotatably mounted on the wiper for the applicator, this results in a permanent fixed position of the container inner wall wiper. This makes it much easier to establish the connection required to transmit the rotational movement of the applicator to the container inner wall scraper.

[0027] A bearing at the "end of the wiper for the applicator" preferably means a position of the wiper within an area between the free end of the wiper facing the interior of the container and a distance, measured from there, of less than one third of the total length of the wiper towards its other free end, measured along the longitudinal axis of the wiper for the applicator.

[0028] In another preferred embodiment, the container inner wall wiper forms a cage for receiving the applicator. The cage comprises a plurality of rods spaced apart from each other around the outer periphery of the applicator. The rods terminate in a ring at least at one end face. Through the free interior of this ring, the applicator can be pulled outwardly from the container and reinserted into the container.

[0029] The applicator then protrudes into the cage of the container inner wall wiper when it is fully inserted into the container.

[0030] The spacing between the rods allows cosmetic to be conveyed from the wall area of the container to the applicator. That the rods are "spaced" from each other means that, starting from the free end facing away from the ring, they are not in contact, or substantially not in

contact, with the respective adjacent rods until they merge into the ring.

[0031] In this case, the rods at the free end of the container inner wall wiper facing away from the ring are ideally not connected to each other.

[0032] However, it is also conceivable as a variant of the invention that the rods also merge into one another at the free end of the container inner wall wiper facing away from the ring and that there is a distance between the rods only between the two free ends of the container inner wall scraper.

[0033] In this embodiment, it is further convenient that the ring forming the end of the rods of the container inner wall wiper and through which the applicator is inserted into or withdrawn from the container simultaneously forms the wiper or at least part of the wiper provided for the applicator.

[0034] A "ring" in this sense is an element or a section whose extension in the longitudinal direction is less than or at most equal to its mean extension in the circumferential direction and which has an opening in the region of its longitudinal axis.

[0035] It is not necessary for the cross-section or the aperture of the "ring" to be circular. The ring can also represent only a section of a further area of the cosmetic unit or of the container inner wall wiper which integrally merges into it and adjoins it.

[0036] The term "rod" designates an element whose central cross-section is significantly smaller, and ideally at least a factor of five smaller, than its central longitudinal section.

[0037] The 'median' transverse or longitudinal section means, respectively, the transverse or longitudinal section along a plane situated centrally between the two faces of the bar which terminate the transverse or longitudinal section.

[0038] In a further preferred embodiment, the ring has an internal cross-section which is non-circular such that the ring can be driven in rotation in the circumferential direction by the correspondingly non-circular handle of the applicator. In this context, non-circular is preferably understood to mean triangular or square or star-shaped.

[0039] The "clear cross-section" of the ring is to be understood as its breakthrough area. The applicator is guided into or out of the container through this aperture. In the case of a non-circular or triangular or square geometry of the clear cross-section, it is easy to establish a form fit between the ring and the applicator which transmits the rotational movement of the applicator. Accordingly, the ring acts as a coupling to transmit the rotational motion of the ring to the container inner wall wiper. When the applicator is fully inserted into the container, the coupling is closed or positive engagement is established. As soon as the applicator is rotated about its longitudinal axis, the container inner wall wiper also rotates about the longitudinal axis of the applicator. Thereby the container inner wall wiper fulfils its function and conveys cosmetic mass from the wall area of the container to the applicator.

[0040] Ideally, the plurality of rods are elastically deformable. After their insertion into the container, they spread radially outwards due to their resilient spring effect, so that they come closer to the inner wall of the container or preferably touch it, at least in certain areas.

[0041] The spring action of the rods allows the container inner wall wiper to pass through the container opening for its installation inside the container. As soon as the container inner wall wiper has been brought into its intended position inside the container, the spreading of the rods causes them to reach the area of the container close to the wall.

[0042] During a subsequent rotational movement applied by the applicator to the container inner wall wiper, the rods then convey the cosmetic from the wall area to the applicator. The spring action of the rods also has the advantage that the container inner wall wiper adjusts to the instantaneous fill level of the container. The further the container is emptied, the further the rods can spread outwards towards the inner wall of the container due to the spring effect.

[0043] In a further preferred embodiment, the rods at the end face of the container inner wall wiper facing away from the wiper are not directly connected to one another, but are designed separately from one another.

[0044] This has the advantage that this end of the rods adapts to the filling quantity of the container due to the spring effect, or that the rods also spread towards the inner wall of the container in the area near the bottom of the container.

[0045] Ideally, directly adjacent rods are spaced apart in the circumferential direction. Preferably, the distance is at least half the extension of a rod in the circumferential direction.

[0046] If the distance between the rods is too small, the spaces between the rods will become clogged, rendering the container inner wall wiper unusable. If, on the other hand, the distance is too great, there may not be sufficient conveyance of cosmetic to the applicator. Rather, the rods then only drag along the cosmetic located in the wall area of the container, thereby compacting it.

[0047] Due to the above-mentioned distance between the rods, a good conveying effect is achieved in the direction towards the applicator when the container inner wall wiper is rotated.

[0048] In a further preferred embodiment, the rods can be moved towards each other in a radial direction in an elastic-reversible manner. In this way, they can be pushed through the clear opening of a wiper into the interior of the container.

[0049] The overall diameter of the container inner wall scraper can thus be reduced for assembly. Once the container inner wall scraper is inside the container, the elastic reversibility ensures that the container inner wall scraper cannot fall out of the container again through the container opening.

[0050] Preferably, the clear inner cross-section of the container decreases towards its bottom facing away from

the wiper. The reduction in cross-section is such that the cosmetic mass creeping downwards from above under the influence of gravity thereby comes radially closer to the applicator inserted completely into the container.

[0051] On the one hand, this in itself means that the container can be emptied completely more easily with the applicator and no residues remain. In addition, this increases the conveying effect of the container inner wall wiper towards the applicator. This applies in particular to the lower or narrower area of the container in relation to the cross-section of the container.

[0052] In another preferred embodiment, the applicator passes over a stem into a cap which forms the closure cap of the container.

[0053] Thus, there is no need for an extra closure for the container, which could possibly get lost. Furthermore, the applicator is prevented from falling in or being accidentally inserted too deeply into the container.

[0054] Ideally, the cap is screwed onto the container with the aid of a short thread. The short thread preferably requires less than a 120° turn to open or close or more preferably, less than a 90° turn to open or close.

[0055] In the case of a known multiple rotation thread, any contamination of the thread by cosmetic may mean that it is difficult or impossible to screw the closure cap completely onto the container. In the worst case, complete closure of the container is then no longer possible, so that the cosmetic unit can no longer be transported lying down and is therefore worthless for the typical user. It is true that such a thread could be cleaned without any problems. However, this means additional effort and in practice often leads to the cosmetic unit being disposed of instead.

[0056] In principle, a short thread can also be contaminated by the cosmetic. However, much more contamination is required than with a regular thread until the short thread can no longer be closed completely.

[0057] In a further preferred embodiment, the bristle trim of the applicator or at least the bristle carrier thereof has a geometric shape corresponding to the geometric shape of the clear cross-section of said ring. If the ring has an internal cross-section in the shape of a triangle, the bristle trim or the bristle carrier preferably also has a cross-section substantially in the shape of a triangle.

[0058] The ring acts as a wiper in this embodiment. If the ring and the bristle trim or the bristle carrier have a similar shape, this improves the wiping effect.

[0059] Preferably, the bristle set of the applicator and the container inner wall wiper are matched to each other such that the bristle set of the applicator presses the container inner wall wiper at least locally towards the inner wall of the container. This occurs at least when the applicator is fully inserted into the inner wall wiper.

[0060] In particular, if the container inner wall wiper is formed from a cage of elastic rods, this supports the spring action of the rods, and thus promotes the action of the container inner wall wiper. This is particularly advantageous in the region of the free end of the rods forming the cage, since the spring action of the rods is lowest there.

[0061] In a further preferred embodiment, all or part of the individual rods of the inner container wall wiper have a blade profile which assists in displacing cosmetic composition from the area of the inner container wall towards the applicator. Preferably, the blade profile has the shape of a plough-like profile.

[0062] Cosmetic adhering to the container wall is reliably removed, enabling the container to be emptied completely. Unintentional compaction of the cosmetic by the container inner wall scraper is thus prevented.

[0063] A "blade profile" is to be understood as a profile which has a curvature or a bend whose convex side faces the inner wall of the container. It is also conceivable that the individual curvatures of the rods forming the cage of the container inner wall wiper are arranged helically around the longitudinal axis of the container, so that one leg of the respective curvature scrapes with its free end along the container inner wall and removes cosmetic, while the other leg conveys the removed cosmetic to the applicator.

[0064] Independent protection is also claimed for a combination of an inner wall wiper for a container and a wiper for an applicator, which are positively connected to each other. Whereby the combination of inner wall wiper and wiper comprises one or more features relating to the inner wall wiper and/or the wiper according to one or more of the preceding claims.

[0065] Such a combination of inner wall scraper and scraper can be used, if appropriately designed, to retrofit an existing cosmetic unit.

FIGURE LIST

[0066]

Fig. 1 shows a longitudinal section through a cosmetic unit according to the invention

Fig. 2 shows the cosmetic unit from Fig. 1 in cross-section

Fig. 3 shows a further embodiment of a cosmetic unit in longitudinal section

Fig. 3a shows a variant of Fig. 3

Fig. 4 shows the cosmetic unit from Fig. 3 in cross-section

Fig. 5 shows a detailed view of the scraper of the cosmetic unit from Fig. 3.

Fig. 6 shows the cosmetic unit of Fig. 3 in isometric view without the container.

Figs. 7 to 9 show the mounting of the inner wall wiper

Fig. 10 show the different cross sections for appropriate stems

PREFERRED EMBODIMENT

[0067] The operation of the invention is described by way of example with reference to Figs. 1-10.

[0068] In Fig. 1, a cosmetic unit 1 according to the invention is shown in longitudinal section. The cosmetic unit 1 is in the closed state. The applicator 6 is fully inserted into the container 2 of the cosmetic unit 1. The closure cap 3 of the cosmetic unit 1, which is connected to the applicator 6 or, more exactly, to its cap receiving portion, is screwed onto the thread 18 in this state, so that the container 2 is closed.

[0069] The applicator 6 is used to remove cosmetic from the container 2 and apply it to a desired area. For this purpose, a bristle trim 7 is attached to a free end of the stem 8 of the applicator 6. The bristle trim 7 is wetted with cosmetic when the applicator 6 is inserted into the container 2. The device carrying bristle trim 7 can be preferably provided with a retaining pin 16 which is assembled state inserted into and latched with the stem 8 of the applicator 6. At the end of the stem 8 facing away from the bristle carrier 13, the stem 8 integrally merges with the part 14 of the closure cap 3 of the cosmetic unit 1. The two closure cap parts 14 and 15 together form not only the closure cap 3, but also the handle 3 of the applicator 6.

[0070] In order to wet the applicator 6 or its bristle trim 7 with cosmetic, it is inserted into the container 2 through the container opening 5 of the container 2, as shown in Fig. 1. The container opening 5 of the container 2 is formed by a collar projecting from the rest of the container 2, on the outer circumferential surface of which the closure cap 3 is screwed by means of the thread 18.

[0071] The diameter of the container 2 is preferably largest in the region adjacent to the container opening 5, and preferably decreases from there towards the end remote from the container opening 5. This option creates an inclination of the inner wall 4 of the container towards the bottom of the container, which favours a subsequent flow or creep of cosmetic towards the lower region of the container 2 which is radially closer to the bristle trim 7 of the applicator. This is advantageous since the bristle trim 7 of the applicator 6 is located in this region when the applicator 6 is fully inserted into the container 2.

[0072] In order to wipe off excessive cosmetic from the bristle trim 7 as well as from the handle 8 of the applicator when pulling out the applicator 6, the wiper 9 is provided in the area of the removal opening 5 of the container 2. The applicator 6 must be guided through this when it is inserted into or withdrawn from the container 2.

[0073] The wiper 9 is formed by the ring 12 of the container inner wall wiper 10 and the wiper sleeve 17. The wiper sleeve 17 is, when assembled, is pushed into the container opening 5 provided for removal. In order to secure the wiper sleeve 17 against slipping in the direction of the longitudinal axis of the container 2, it is provided with a retaining collar 21 and the sleeve snap ring 20. In the assembled state, the sleeve snap ring 20 engages in an associated groove in the inner circumferential surface of the removal opening 5 or vice versa.

[0074] At the free end of the wiper sleeve 17 facing the interior of the container, it is provided with the retainer 22. The retainer 22 engages in an associated groove in the outer peripheral surface of the ring 12. As a result, the ring 12 is positively secured against slippage in the longitudinal direction of the container 2, while rotational movement about the longitudinal axis of the container 2 is still possible.

[0075] The ring 12 forming the wiper 9 is also a component of the container inner wall wiper 10.

[0076] The container inner wall wiper 10 serves to convey cosmetic from the wall area of the container 2 in the direction of the applicator 6 or its bristle set 7.

[0077] For this purpose, the container inner wall wiper 10 has several rods 11. At least their free ends rest against the inner wall 4 of the container.

[0078] The rods 11 have in most cases a curvature along their longitudinal axis, the convex sides of which face the inner container wall 4. As can be seen from Fig. 2 it is preferred that the extension of the rods 11 in circumferential direction decreases towards the ends of the rods while it is bigger in the middle area of the rods 11. That produces a positive influence to the flexing behaviour of the rods 11.

[0079] In order to convey cosmetic from the wall region of the container 2 towards the applicator 6, a rotational movement about the longitudinal axis of the container 2 is imposed on the container inner wall wiper 10.

[0080] As a result, depending on the consistency of the cosmetic in the container 2, a flow or creep is generated in the direction towards the applicator 6, or cosmetic is removed from the wall region by scraping and conveyed towards the applicator 6.

[0081] The cosmetic reaches the applicator 6 through free spaces between the rods 11. These free spaces between the adjacent rods 11 can also be seen in Fig. 2, which shows a cross-section of the cosmetic unit 1. It is preferred that only at the end of the rods 11 facing the removal opening 5 of the container 2 the rods merge integrally into the ring 12, so that there is no longer any free space between the rods 11.

[0082] The cross-sectional profile of the rods 11 can also be seen with reference to Fig. 2. The cross-section of each rod 11 represents a section of a circular ring. It is thus formed by two parallel curved edges joined at both free ends by the respective common normal. In sum, the cross-section of the cage of the container inner wall wiper 10 formed by the rods 11 results in a circular ring with cake-like gaps.

[0083] Due to the cake piece-like cutouts between the rods 11, good conveyance of cosmetic to the center of the container 2 takes place regardless of the direction in which the container inner wall scraper 10 rotates. This is

due to the fact that cosmetic scraped from the inner wall of the container 4 is in contact with the lateral surfaces of the rods 11 connecting the two curved surfaces. These side surfaces extend from their edge facing the inner container wall 4 at an angle in the direction of the longitudinal axis of the inner container wall wiper 10, which forms the axis of rotation. This angle towards the centre of the axis of rotation promotes the movement of the cosmetic towards the centre of the container 2.

[0084] The rotational movement of the container inner wall wiper 10 is generated by means of the applicator 6. The ring 12 of the container inner wall wiper 10, which forms the wiper 9, has an aperture through which the applicator 6 is guided and which surrounds the stem 8 of the applicator 6 when the applicator 6 is completely in the container 2. The cross-sections of the applicator stem 8, as well as of the aperture in the ring 12 are thereby not circular, but represent a triangle or a square.

[0085] Thus, the stem 8 and the aperture of the ring 12 form a positive connection through which a rotational movement of the applicator 6 is transmitted to the ring 12 and thus to the container inner wall wiper 10.

[0086] Accordingly, in order to remove cosmetic from the region of the inner container wall 4, it is only necessary to rotate the applicator 6 on about its longitudinal axis. Since a rotational movement of the applicator 6 is not possible when its handle 3 has been screwed onto the container 2, the cross-section of the handle 8 along its entire length is designed as a triangular or quadrangular profile. Accordingly, the form fit between the stem 8 and the ring 12 is already created as soon as a part of the stem 8 protrudes through the ring 12.

[0087] As can be seen in Fig. 1, the diameter of the removal opening 5 is significantly smaller than the diameter of the part of the container 2 containing the cosmetic. In order to be able to insert the container inner wall wiper 10 into the container 2, the rods 11 are made of a reversibly elastic material. Thus, the rods 11 can be compressed such that the diameter of the container inner wall wiper 10 formed by their entirety is significantly reduced. In this state, the container inner wall wiper 10 can then be pushed into the container 2 through the removal opening 5.

[0088] Inside the container 2, the reversible elastic material of the rods 11 relaxes so that the rods 11 come close to the container inner wall 4.

[0089] A further embodiment of a cosmetic unit 1 according to the invention is shown in Figs. 3, 3a to-6. In Fig. 3, the cosmetic unit 1 is shown in longitudinal section. The container inner wall wiper 10 is not shown in its entirety, but only its ring 12 forming the wiper 9. The mode of operation of the cosmetic unit 1 of this embodiment example differs only slightly from the mode of operation of the cosmetic unit 1 of the above embodiment example.

[0090] One major difference is the method of attachment of the closure cap 4 to the container 2. As Fig. 6 shows, the closure cap 3 is not provided with a multi-start internal thread with which it can be screwed onto an associated external thread of the container 2. Instead, the short thread 18 formed by two respective milled-out portions is provided in the closure cap 3.

[0091] With reference to Fig. 3, the bristle trim 7 not shown in the previous embodiment can be seen. In addition, with reference to Figs. 4 and 6, the triangular cross-section of the handle 8 of the applicator 6 can be seen. Such a short thread 18 is relatively smooth-running even when lightly contaminated by cosmetic.

[0092] The Figs. 7 to 9 visualizes the mounting process. It is preferred that the inner wall wiper 10 and the wiper 9 are preassembled before being inserted into the container. As one can see the inner wall wiper is flexible enough to be compressed in an extent that it can be stuck trough the bottle neck. As soon as it is in or is going to arrive at its position in the bottle it expands again coming that way in contact with the inner surface of the bottle which is to be wiped.

[0093] The Fig 10 visualizes design options for the stem which has to drive the inner wall wiper as soon as being turned.

REFERENCE LIST

[0094]

1	Cosmetic unit
2	Container
3	Cap
4	Container inner wall
5	Dispensing opening
6	Applicator
7	Bristle trim
8	Stem
9	Wiper for the applicator
10	Container inner wall wiper
11	Rods of the container inner wall wiper
12	Ring of the container inner wall wiper
13	Bristle carrier
14	Part of the cap connected to the applicator stem
15	Outer part of the cap
16	Coupler pin of the bristle carrier
17	Bracket wiper
18	Thread or short thread of the cap
19	Connecting pin of the cap
20	Sleeve snap ring
21	Retaining neck of the wiper
22	Retainer formed by the wiper

Claims

1. A cosmetic unit (1) comprising a container (2) intended to receive a cosmetic, a dispensing opening (5), an applicator (6) for dispensing cosmetic from the container (2) through the dispensing opening (5) thereof, and a wiper (9) for wiping off cosmetic adhering to the applicator in excess of its intended load-

ing amount, **characterised in that** a rotatably mounted container inner wall wiper (10) is held in the interior of the container (2), which comes into contact with the applicator (6) in the course of its insertion into the container, in such a way that the container inner wall wiper (10) follows a future rotational movement of the applicator (6), and wherein the container inner wall wiper (10) is designed in such a way that - at least after partial emptying of the container (6) - in the course of this rotational movement it conveys cosmetic from the wall region of the container (2) in the direction towards the applicator (6).

2. Cosmetic unit (1) according to claim 1, **characterised in that** the container inner wall wiper (10) is rotatably mounted on the wiper (9), preferably at its end facing the interior of the container (2).

3. Cosmetic unit (1) according to claim 1 or 2, **characterised in that** the container inner wall wiper (10) forms a cage for receiving the applicator (6), which cage consists of several rods (11) which surround the outer circumference of the applicator (6) at a distance from one another and which preferably root in a ring (12) at least at one end face, through the interior of which ring (12) the applicator (6) can be pulled out of the container (2) to the outside and inserted back into the container (2).

4. Cosmetic (1) unit according to the immediately preceding claim, **characterised in that** the ring (12) has an internal cross-section which is non-circular in such a way that the ring (12) can be driven in rotation in the circumferential direction by the correspondingly non-circular stem (8) of the applicator, non-circular preferably being understood to be 3- or 4-cornered.

5. Cosmetic (1) unit according to one of the preceding claims, **characterised in that** the several rods (11) are elastically deformable and spread radially outwards after their insertion into the container (2) due to their resilient spring action, so that they come closer to the inner wall of the container (2) or preferably touch it.

6. Cosmetic unit (1) according to one of the preceding claims, **characterised in that** the rods (11) on the end face of the container inner wall wiper facing away from the applicator's wiper are not directly connected to one another, but are designed separately from one another.

7. Cosmetic unit (1) according to one of the preceding claims, **characterised in that** rods (11) which are directly adjacent in the circumferential direction maintain a distance from one another, preferably a distance which is at least half the extent of a rod (11) in the circumferential direction.

8. Cosmetic unit (1) according to one of the preceding claims, **characterised in that** the rods (11) can be moved elastically-reversibly towards each other in the radial direction in order to be pushed in this way through the clear opening of a wiper (9) into the interior of the container (2).

9. Cosmetic unit (1) according to one of the preceding claims, **characterised in that** the clear inner cross-section of the container (2) decreases towards its base facing away from the wiper (9), so that cosmetic mass creeping downwards from above under the influence of gravity thereby comes radially closer to the applicator (6) inserted completely into the container (2).

10. Cosmetic unit (1) according to one of the preceding claims, **characterised in that** the applicator (6) passes via a stem (8) into a cap (3) which forms the closure cap of the container (2).

11. Cosmetic unit (1) according to the immediately preceding claim, **characterised in that** the cap (3) is screwed onto the container (2) by means of a short thread which preferably requires less than one 120° turn and preferably less than one 90° turn for screwing and unscrewing.

12. Cosmetic unit (1) according to one of the preceding claims, **characterized in that** the bristle trim (7) of the applicator (6) or at least its bristle carrier has a geometric shape corresponding to the geometric shape of the clear cross-section of said ring (12) and therefore, if the ring (12) has a clear cross-section in the shape of a triangle, preferably also has a cross-section substantially in the shape of a triangle.

13. Cosmetic unit (1) according to one of the preceding claims, **characterised in that** the bristle trim (7) of the applicator and the container inner wall wiper (10) are matched to each other in such a way that the bristle trim (7) of the applicator (6) presses the container inner wall wiper (10) at least locally towards the inner wall of the container (2), at least when the applicator (6) is fully inserted into the inner of the container (2).

14. Cosmetic unit (1) according to one of the preceding claims, **characterised in that** the individual rods (11) of the container inner wall wiper (10) - all or partially - have a blade profile, preferably in the form of a plough-like profile, which assists the displacement of cosmetic mass from the area of the container inner wall towards the applicator (6) .

15. Combination of an inner wall wiper (10) for a con-

tainer and a wiper (9) for an applicator (6), which are positively connected to one another, having one or more features relating to the inner wall wiper and/or the applicator's wiper according to one or more of the preceding claims.

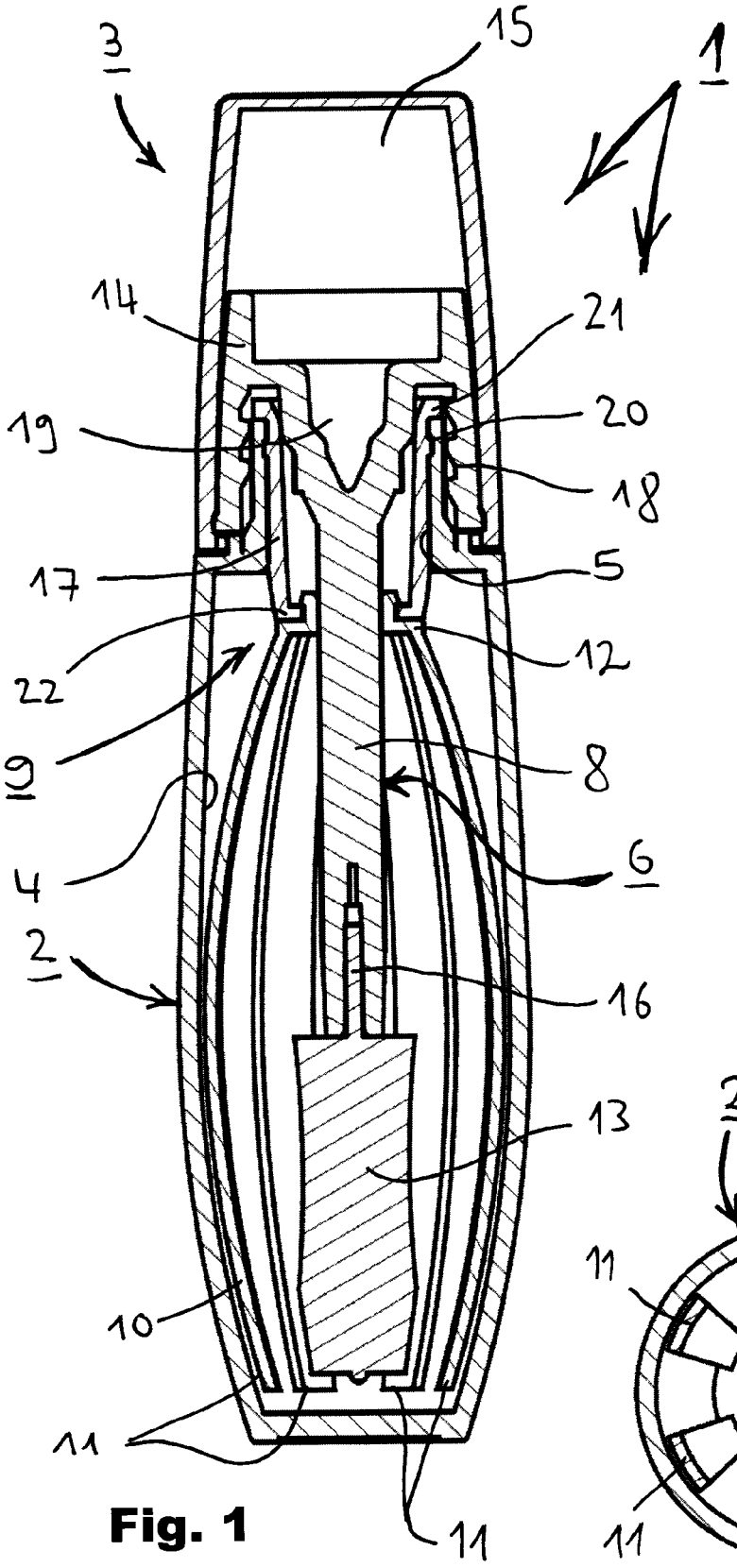


Fig. 1

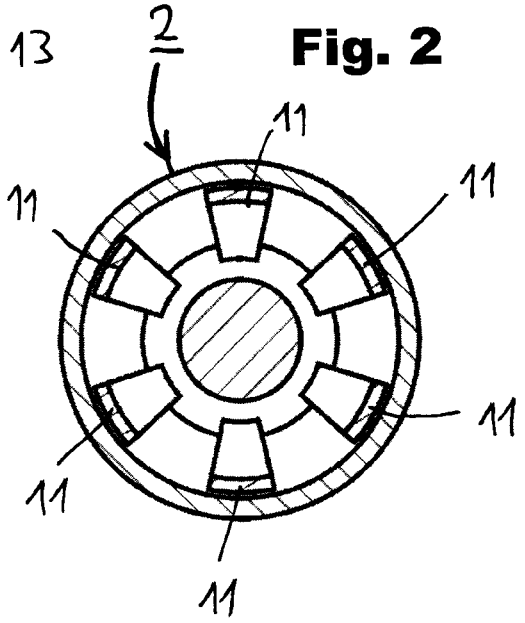
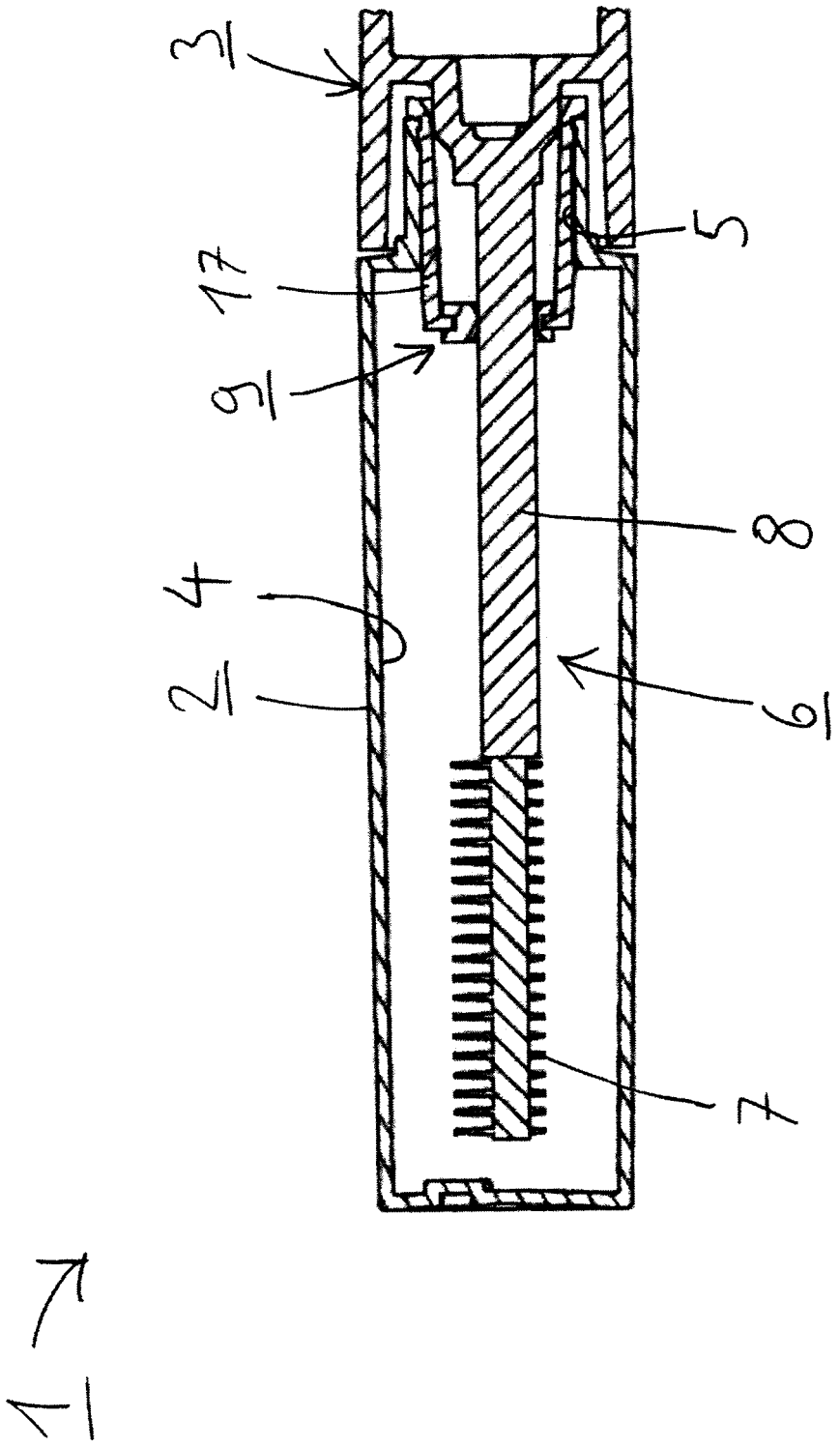


Fig. 2

Fig. 3



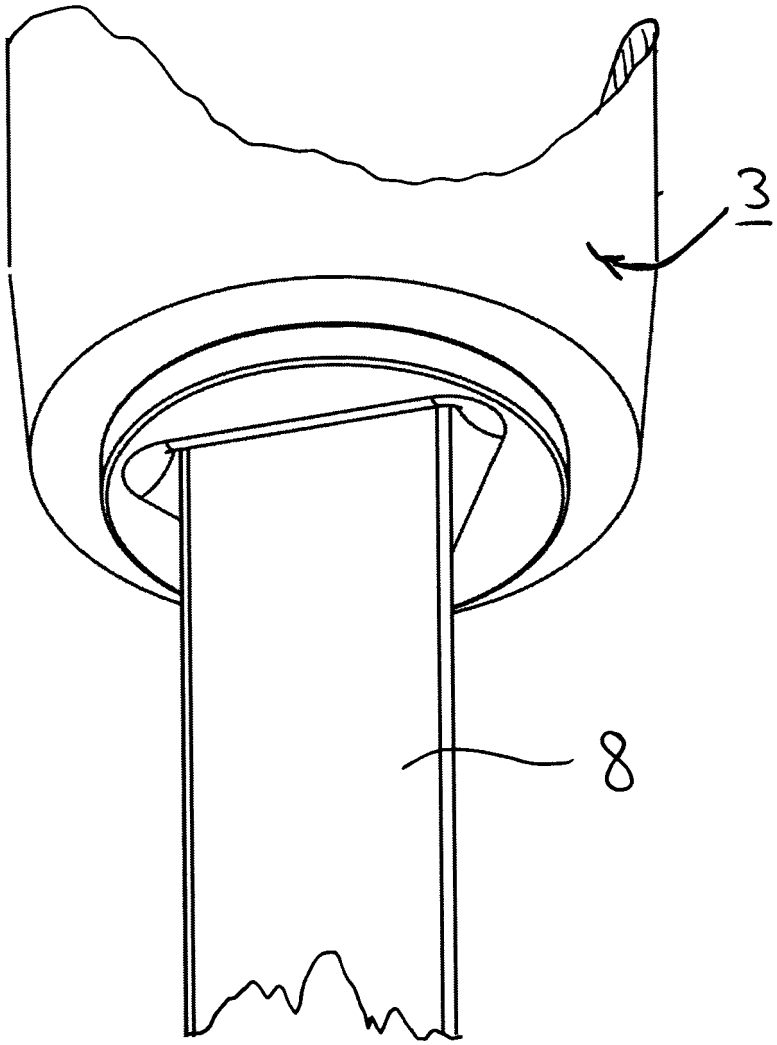


Fig. 3a

Fig. 4

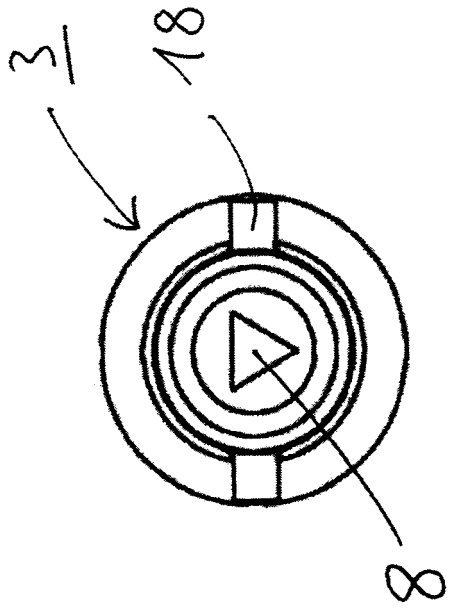


Fig. 5

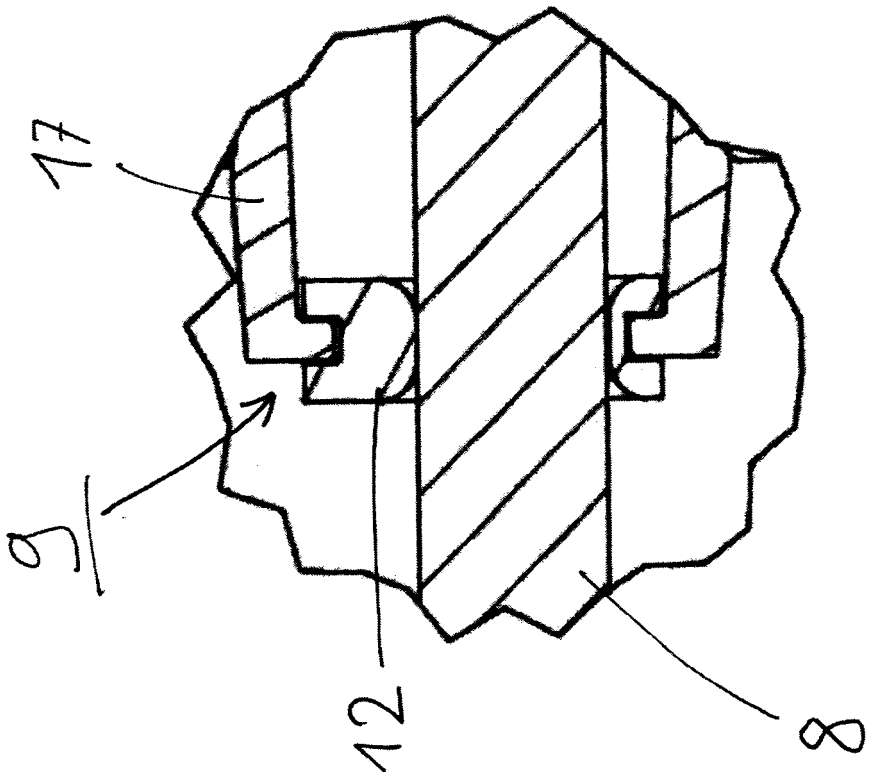
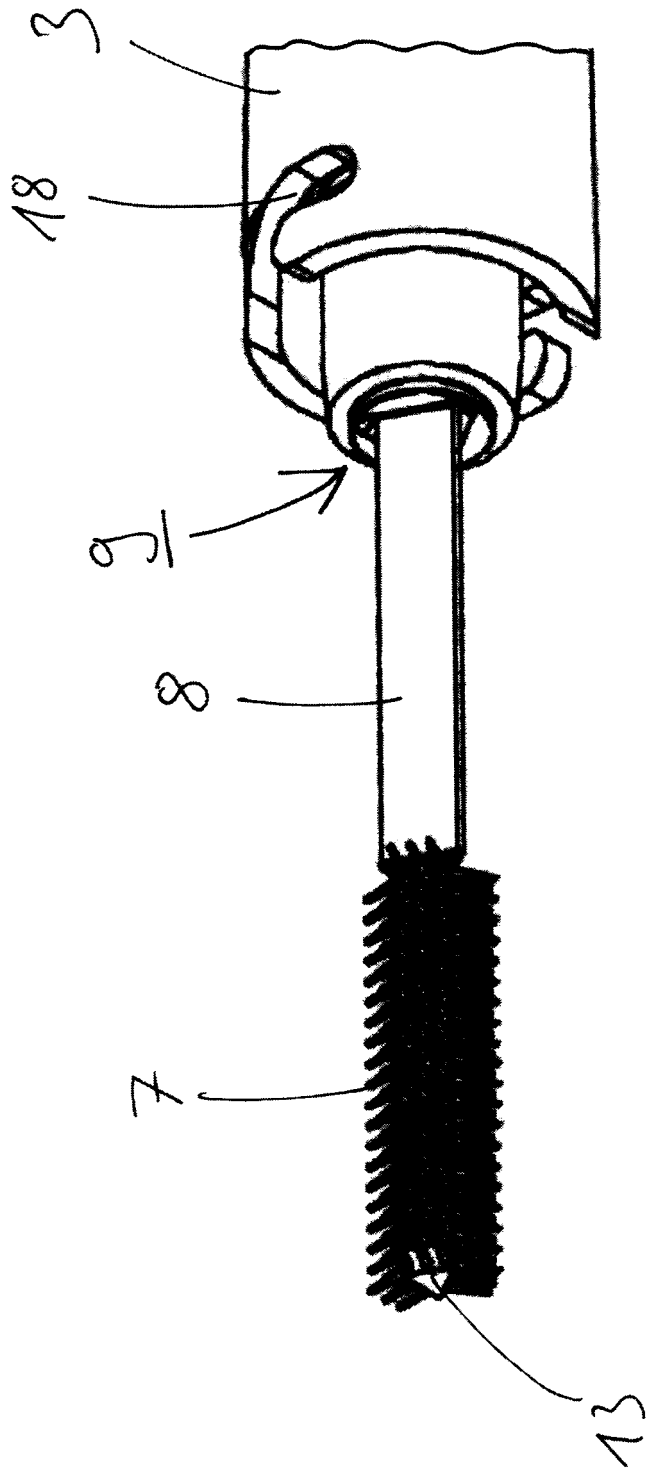


Fig. 6



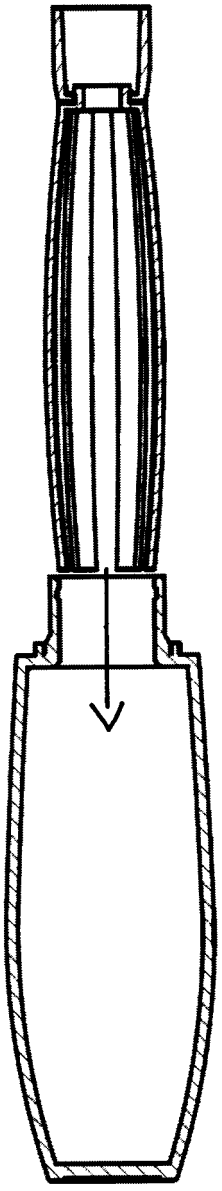


Fig. 7

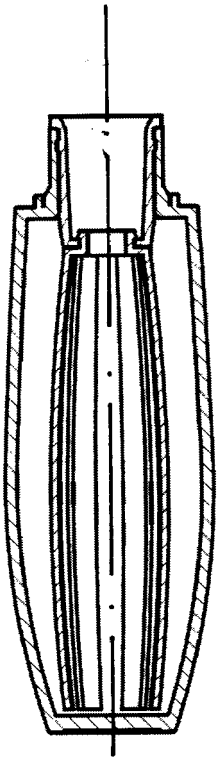


Fig. 8

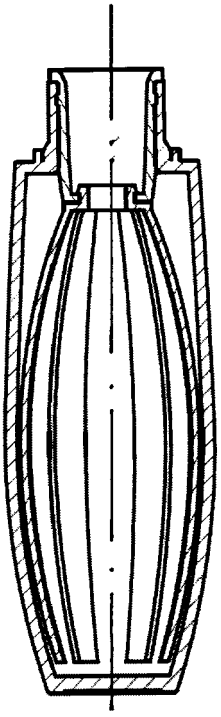
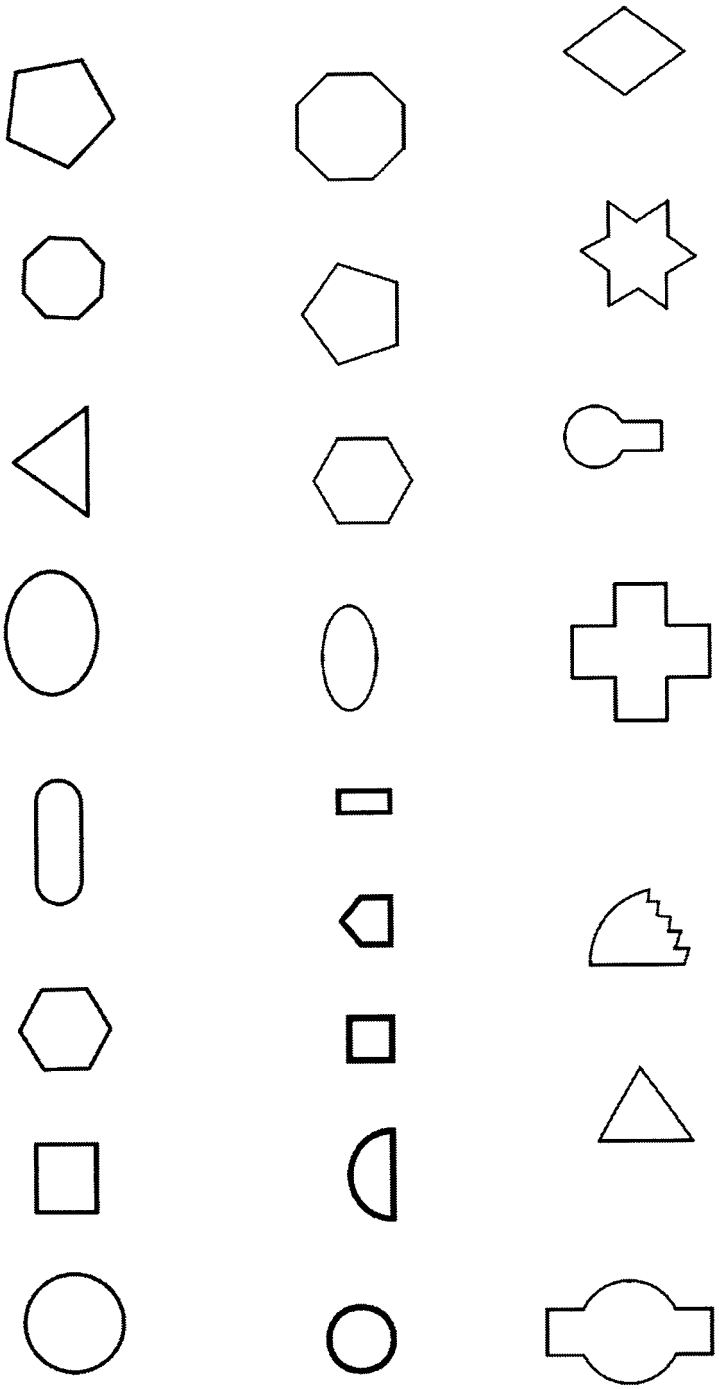


Fig. 9

Fig. 10



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EUROPEAN SEARCH REPORT

Application Number
EP 21 20 2668

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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TECHNICAL FIELDS SEARCHED (IPC)

A45D
B01F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	22 March 2022	Nicolás, Carlos

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