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(71) Applicant: **Top Green World Packaging Co., Ltd.**
Shanghai, Shanghai 201506 (CN)

(72) Inventor: **WANG, Lin-da**
Shanghai, Shanghai 201506 (CN)

(74) Representative: **dompatent von Kreisler Selting Werner - Partnerschaft von Patent- und Rechtsanwälten mbB**
Deichmannhaus am Dom Bahnhofsvorplatz 1 50667 Köln (DE)

(54) **WET WIPE FLIP-TOP CAP AND FLIP-TOP SET WITH CONVENIENT OUTLET**

(57) The invention discloses a flip-top cap (A) and flip-top set with convenient outlet for taking out wet wipes. It includes the cap body (1) and the upper cover (2). The cap body has an aperture in its central part and is molded with an elastic sealing cover (3) inside, which completely cover the above-mentioned aperture; the cap body is sealed and fixed on the wet wipes outlet of the wet wipes

bag. Being applied with downward force, the elastic sealing cover will open a small-diameter outlet (31) for taking out wet wipes; and when the force applying stops, the elastic sealing cover can resume back to closing state. This application solves the inconvenient wet wipes take-out problem from outlet with a small diameter, and is convenient to use.

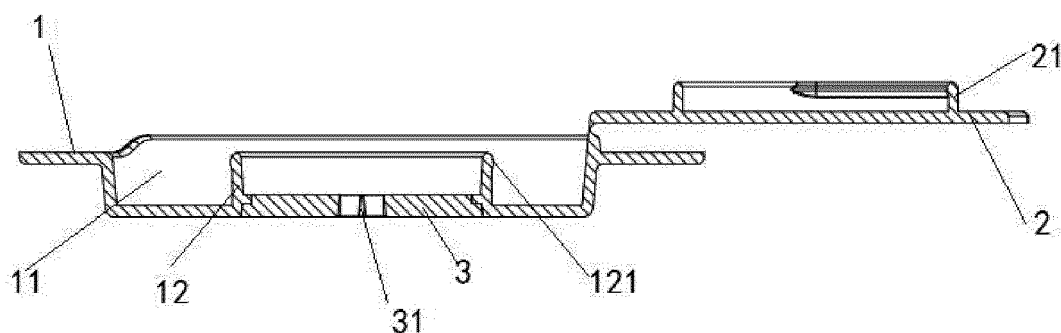


Figure 3

Description

Technical field

[0001] The invention concerns wet wipe packing techniques. More specifically, it is a wet wipe flip-top cap and flip-top set with convenient outlet.

Background techniques

[0002] The wet wipe package usually has a flip-top cap, on which, an outlet is designed at the central part, thus to take out wet wipes from the outlet whenever necessary.

[0003] The outlets on the wet wipe package is usually designed in comparatively large opening in order for the convenience of pinching wet wipe by fingers. Though it is easy to take out wet wipe from such large-size outlet, it can take too many wet wipes a time, and the remaining wet wipes could easily lose moisture and get contaminated.

[0004] In consideration of the above-mentioned problems, the outlet has been designed towards smaller size. However, it is not easy to take the wet wipes out from small-size aperture, and usually needs other tools to take the wet wipes out. This is very inconvenient for use.

invention contents

[0005] In view of the above technical problems, the wet wipe flip-top cap and flip-top set with convenient outlet are proposed in this application, aiming at tackling the problem that the sealing performance of wet wipe flip-top cap which is made under existing technologies can not satisfy relative requirements, and the tearing design makes it be torn easily and hard to store.

[0006] In order to achieve the above technical objectives, the technical solutions as listed below are applied in this application:

A wet wipe flip-top cap with convenient outlet is composed of the cap body and the upper cover. The cap body has an aperture in its central part and is molded with an elastic sealing cover inside, which completely cover the above-mentioned aperture; the cap body is sealed and fixed on the wet wipe outlet of the wet wipes bag. Being applied with downward force, the elastic sealing cover will open a small-diameter outlet for taking out wet wipes; and when the force applying stops, the elastic sealing cover can resume back to closing state.

[0007] Preferably, the side of the elastic sealing cover near the wet wipe is set with a cut or an etching mark not penetrating the upper surface of the elastic sealing cover.

[0008] Preferably, the cut is made in a crisscross structure.

[0009] Preferably, the formed small-diameter outlet is of 2-12mm diameter..

[0010] Preferably, the side of the four walls with penetrated aperture facing the upper cover is set with vertical

ring-wall. And the external side of the ring-wall is set with recessed clamp slot or raised clamp strip.

[0011] Preferably, the upper cover is set with sealing wall for clamping with the ring-wall. And the ring-wall is designed with corresponding raised clamp strip or recessed clamp slot.

[0012] Preferably, the clamp strip is a hard raised strip or an elastic rubber strip.

[0013] By applying the above-mentioned technical solution, and taking use of the elastic sealing cover features, the wet wipe flip-top cap with a convenient outlet as stipulated in this application can not only tackle the problem that large-diameter aperture outlet can result in moisture loss and containment, but also solve the inconvenience of taking out wet wipe from small aperture. When applying force on the sealing cover, the wet wipe outlet would be opened, so that the wet wipe could be taken out from the top of the package bag. And when the force is removed, the sealing cover can resume back to closed state and guarantee convenient and safe use.

[0014] This application also discloses a wet wipe flip-top set, including the wet wipe flip-top cap with a convenient outlet as mentioned above, and: a hook body, which is composed of a sharp end and a hook end. The sharp end is used to pierce the elastic sealing cover while the hook end is used to hook the wet wipe and pull it out through the elastic sealing cover.

[0015] Preferably, the width of the hook end matches with the length of the cut or etching mark; the thickness of the hook end is consistent with the that of the cut or etching mark.

[0016] By applying the above technical solution, the wet wipe flip-top cap and the hook body of the this application can achieve sealing effect while solving the inconvenience of taking out wet wipes from the bag. The hook penetrates the flip-top cap and hooks the wet wipe, then pull the wet wipe out out of the cap, guaranteeing convenient us of wet wipes.

Description of the drawings

[0017]

FIG. 1 is a schematic diagram of the front structure of the first embodiment of the application;

Fig. 2 is a schematic diagram of the back structure of the first embodiment of the application;

Fig. 3 is a schematic cross-sectional view of the first embodiment of the application;

Fig. 4 is a schematic structural diagram of the first embodiment of the application after being applied with upward force;

Fig. 5 is a schematic structural diagram of a second embodiment of the application;

Fig. 6 is a schematic diagram of the structure of the wet wipe flip-top cap of the second embodiment of the application;

Fig. 7 is a schematic diagram of the back view of Fig.

6;

Fig. 8 is a schematic diagram of the use of the second embodiment of the application;

Fig. 9 is a schematic diagram drawn by cutting open the wet wipe bag illustrated in Fig. 8

Detailed embodiment

[0018] The following is the further detailed instruction to the technical solution of the invention combining with both the embodiment and the figures.

The first embodiment:

[0019] The wet wipe flip-top cap A with a convenient outlet in this application is mainly used on wet wipe bags, or soft packages that can be raised upwards from the bottom. The wet wipe flip-top cap with convenient outlet is composed of the cap body 1 and upper cover 2.

[0020] Please refer to FIG. 1 and FIG. 2. The wet tissue flip-top cap A with a convenient outlet in this application is set with an aperture on the cap body 1, which is corresponding to the outlet prereserved on the wet wipe bag. The aperture is set with elastic sealing cover 3 inside. As shown in Figure 3, a cut 31 is made upwards from the bottom on the elastic sealing cover 3. And the cut 31 actually doesn't penetrate the upper surface of the elastic sealing cover 3. As shown in Figure 2, the cut 31 is made in crisscross structure.

[0021] Since the elastic sealing cover 3 is made of elastic material, when the elastic sealing cover 3 is subjected to an upward or downward force, the elastic sealing cover 3 correspondingly raises upward or recesses downward, then a small-diameter aperture outlet 32 would be opened on upper surface of elastic sealing cover 3 corresponding to cut 31. The formed small aperture is of 2-12 mm diameter. When the force applied on elastic sealing cover 3 is released, the outlet 32 will resume back to closing state under the effect of the elastic force.

[0022] The upper surface of the elastic sealing cover 3 is kept sealed when the wet wipes are not unpacked for use. Then by applying downward force on the elastic sealing cover 3 with your fingertip, the elastic sealing cover would have one small diameter outlet 32 directly opened at the cut 31 position. Then applying upward force on the outlet 32 corresponding to the wet wipe bag, the wet wipes would be pushed out. It can be seen from Figure 4 that the outlet 32 raises upward and opens, then the wet wipes will be pushed out the outlet under the upward forces, so that users can pinch the wet wipe and release the applied forces to pull it out directly. The sealing cover is elastic, so if there's no forces applied, the elastic sealing cover 3 will shrink and prevent extra wet wipes from being pulled out. When the wet wipe is taken out, the elastic sealing cover 3 will resume back to closed state if there's no applied forces anymore.

[0023] Moreover, in order to further ensure the protection to the wet wipes in the wet wipes bag during use,

the cap body 1 is set with a recessed reclaiming area 11. And the reclaiming area 11 is designed with a ring-wall 12 inside. The external wall of the ring-wall 12 is set with a raised clamp strip 121 (or recessed clamp slot). Besides, the upper cover 2 is set with a raised sealing wall 21 corresponding to ring-wall 12. And the internal wall of the sealing wall 21 is set with a recessed clamp slot corresponding to the ring-wall (or raised clamp strip).

10 The second embodiment:

[0024] As shown in Figure 5, the wet wipe sealing flip-top set of this application includes two components, which are respectively the wet wipe flip-top B and the hook body C. The wet wipe flip-top cap B is sealed and fixed on wet wipe bag D in order to seal up the pre-reserved outlet on the wet wipe bag D (namely the outlet to take out wet wipes), so to keep the wet wipes for longer time or avoid moisture loss or bacterial invasion on the wet wipes after the package is unpacked, and prevent tearing by mistake which can easily happen on existing tearing design. The purposes of the hook body C include: piercing the wet wipe package that has not been opened to form a wet wipe penetration seal on the wet wipe flip-top cap, and the second is to penetrate the wet wipe flip-top cap and hook the wet wipe. Since the wet wipes are made in one roll, when the hook body 2 hooks the first section of the wet wipe, it can pull the wet wipe out of the seal easily.

30 **[0025]** As shown in Figure 6, the wet wipe flip-top cap B of this application is composed of cap body 4 and upper cover 5. The cap body 4 is designed with a penetrating aperture 41 in such a shape matching with that of the outlet. A ring-wall 42 is stretched upward along the sides of the aperture 41. On the upper cover 5, there's a sealing wall 51 formed corresponding to ring-wall 42. The sealing wall 51 and the ring-wall 42 are of elastic clamping. And the external side of the ring-wall 42 is set with recessed clamp slot 43, while the internal side of ring-wall 51 is set with clamp strip 52 matching with clamp slot 43. This clamp strip 52 could be either hard raised strip or elastic rubber strip, thus to guarantee that no seal existing between upper cover 5 and cap body 4 when they are closed.

45 **[0026]** Please refer to Figure 6. The cap body 4 is set with elastic sealing cover 44. Both the elastic sealing cover 44 and the cap body 4 are fixed as one. When applying downward force on the elastic sealing cover 44, a wet wipe penetrating seal would be opened from the middle part. And that's the small-diameter outlet for taking out wet wipes.

55 **[0027]** As shown in Figure 7, in order to open seal conveniently under applied forces, the side of the elastic sealing cover 44 near the wet wipes is set with etching mark 45 not penetrating the elastic sealing cover 44. For etching mark 45, please see figure 7. It is made in a crisscross shape. After being pierced with a sharp object or pushed down with a fingertip, a wet wipe penetrating seal (name-

ly: the small-diameter outlet) can be formed along the etching mark 45 for taking out the wet wipes. However, the etching mark 45 cannot be broken by unconscious damage. The penetrating seal is too small to pinch wet wipes by fingers.

[0028] Therefore, please refer to Figure 5, 8, and 9. A type of hook body C is also disclosed in this application. As shown in the figure, the hook body C includes a sharp end 61 and a hook end 62. The sharp end 61 is used to pierce the elastic sealing cover 44 along the etching mark 45 to open the wet wipe penetration seal. The hook end 62 is used to penetrate the seal, hook and take the wet wipes out from the bag. The width of the hook end 62 matches with the length of the etching mark 45; and the thickness of the hook end 62 is consistent with that of the etching mark 45. The tip of the hook end 62 is made as sharp as possible, so that it can be used to directly pierce the wet wipe and hook and pull the wet wipe out. The structure of the hook end 62 may not be limited to the embodiment in this application.

[0029] The object of this application achieves sealing by wet wipe flip-top cap. As long as the seal is maintained in intact conditions, the wet wipes inside will not have any moisture loss or bacterial invasion problems no matter how long it is stored. Besides, the cap in this application abandons tearing design, instead, the design with internal etching mark is adopted to prevent tearing by mistake. Moreover, the hook body actually helps achieve the purpose of taking wet wipes out conveniently.

[0030] The above-mentioned embodiment are only for the purpose of illustrating this invention, restricting no scope of this invention. The equal changes and modifications made by technical personnel of this field to this invention shall all be included in the scope of this Claims for this invention.

Claims

1. The wet wipe flip-top cap with a convenient outlet is composed of the cap body and the upper cover. The cap body is designed with an aperture in the middle, and is characterized as below:
The cap body is molded with an elastic sealing cover inside, which completely covers the above-mentioned aperture; the cap body is sealed and fixed on the wet wipes outlet of the wet wipes bag. Being applied with downward force, the elastic sealing cover will open a small-diameter outlet for taking out wet wipes; and when the force applying stops, the elastic sealing cover can resume back to closing state.
2. The wet wipe flip-top cap with a convenient outlet stated in Claim 1 is characterized as below: the side of the elastic sealing cover near the wet wipes is designed with cut or etching mark not penetrating the upper surface of the elastic sealing cover.

3. The wet wipe flip-top cap with a convenient outlet stated in Claim 2 is characterized as below: the cut is made in a crisscross structure.
4. The wet wipe flip-top cap with a convenient outlet stated in Claim 3 is characterized as below: the diameter of the formed small-diameter wet wipe outlet is 2-12mm.
5. The wet wipe flip-top cap with a convenient outlet stated in Claim 1 is characterized as below: the side of the penetrating aperture having its four walls facing the upper cover is designed with a vertical ring-wall. And the external side of the ring-wall is set with a recessed clamp slot or a raised clamp strip.
6. The wet wipe flip-top cap with a convenient outlet stated in Claim 5 is characterized as below: the upper cover is provided with a sealing wall to elastically clamp with the ring-wall, and the sealing wall is set with a corresponding raised clamp strip or recessed clamp slot.
7. The wet wipe flip-top cap with a convenient outlet stated in Claim 6 is characterized as below: clamp strip is hard raised strip or elastic rubber strip.
8. A wet wipe flip-top set that is characterized as below: It comprises the wet wipe flip-top cap with a convenient outlet stated in Claim 1-7, and:
A hook body, which includes a sharp end and a hook end. The sharp end is used to pierce the elastic sealing cover while the hook end is used to pass through the elastic sealing cover to hook the wet wipe.
9. The wet wipe flip-top set stated in Claim 8 is characterized as below: the width of the hook end matches with the length of the cut or etching mark; the thickness of the hook end matches with the width of the cut or etching mark.

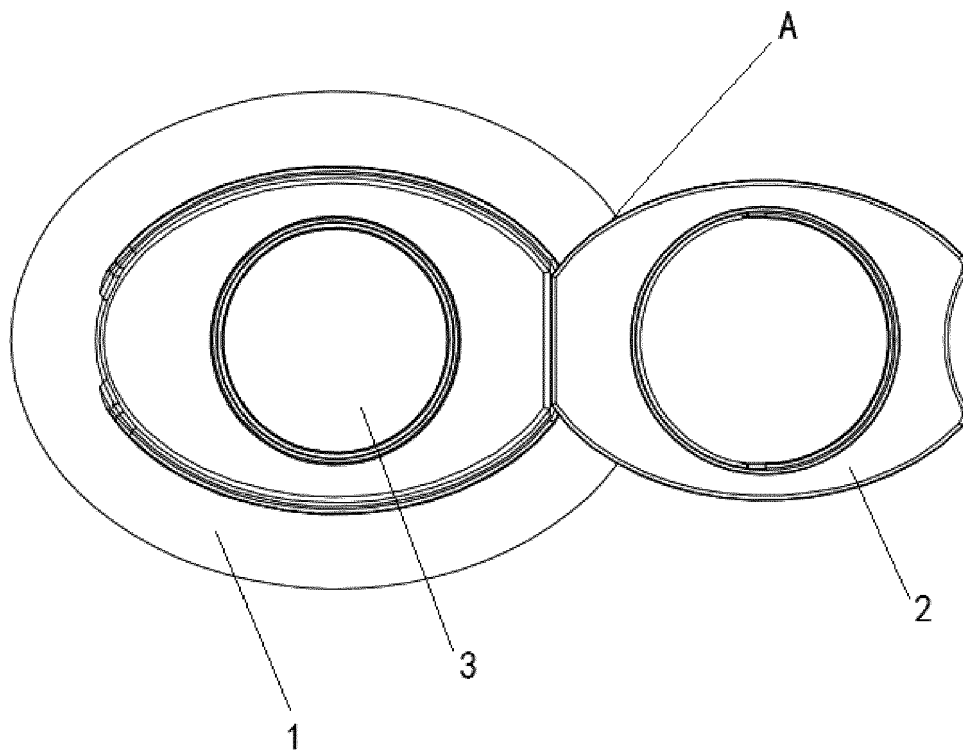


Figure 1

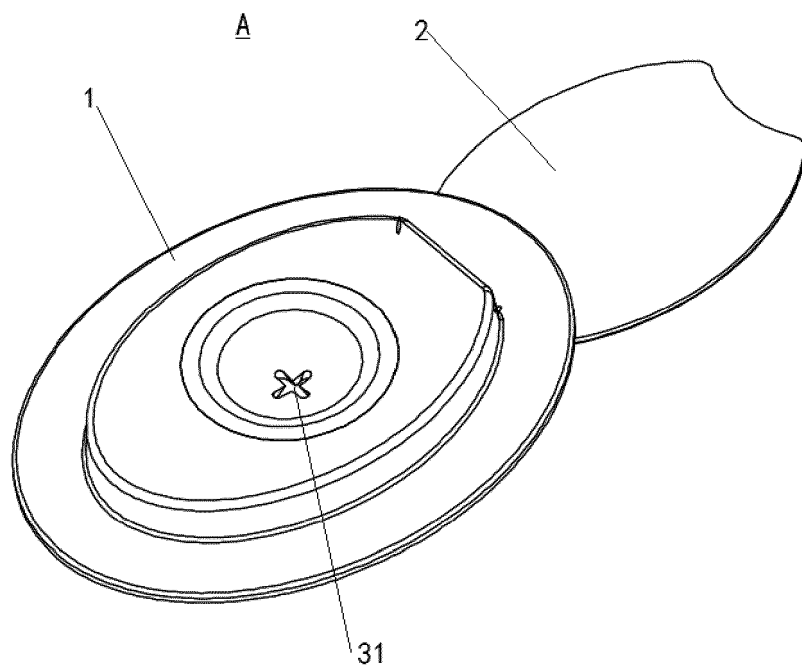


Figure 2

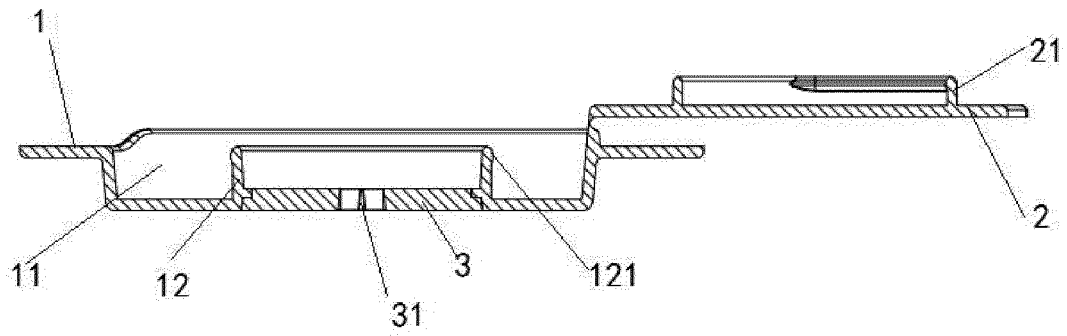


Figure 3

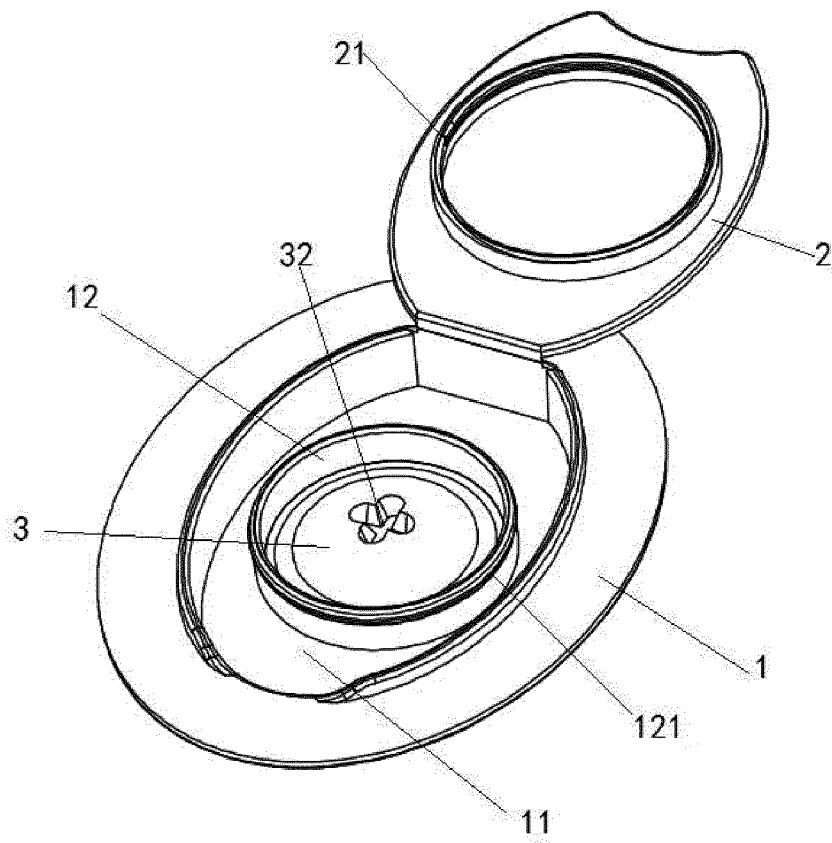


Figure 4

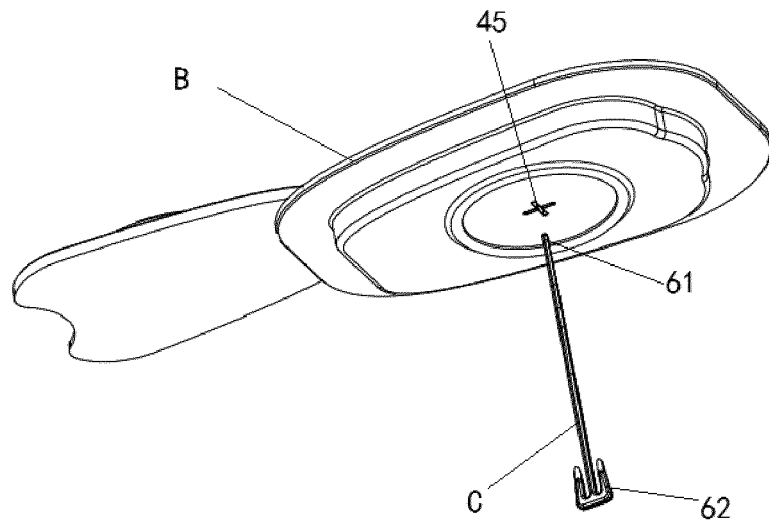


Figure 5

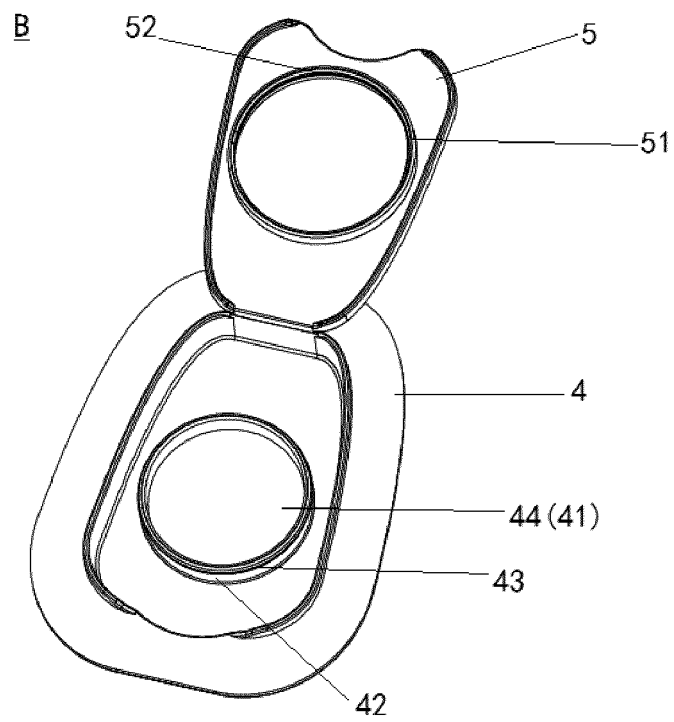


Figure 6

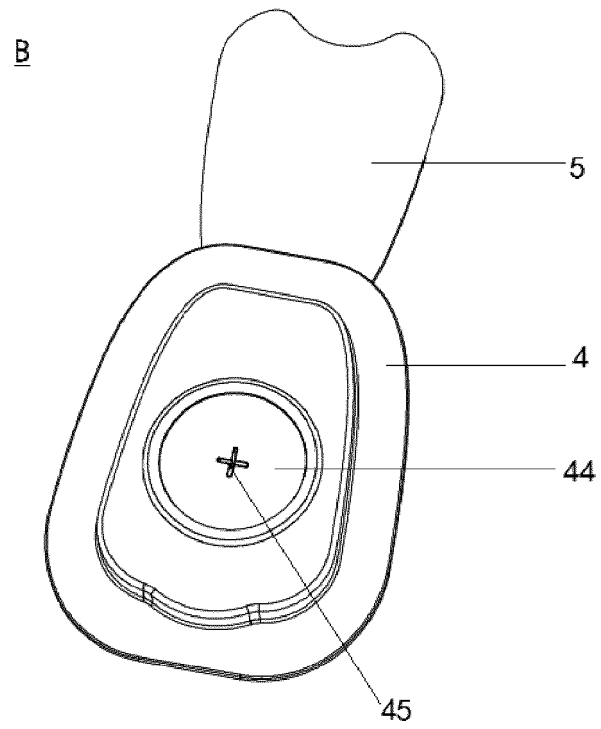


Figure 7

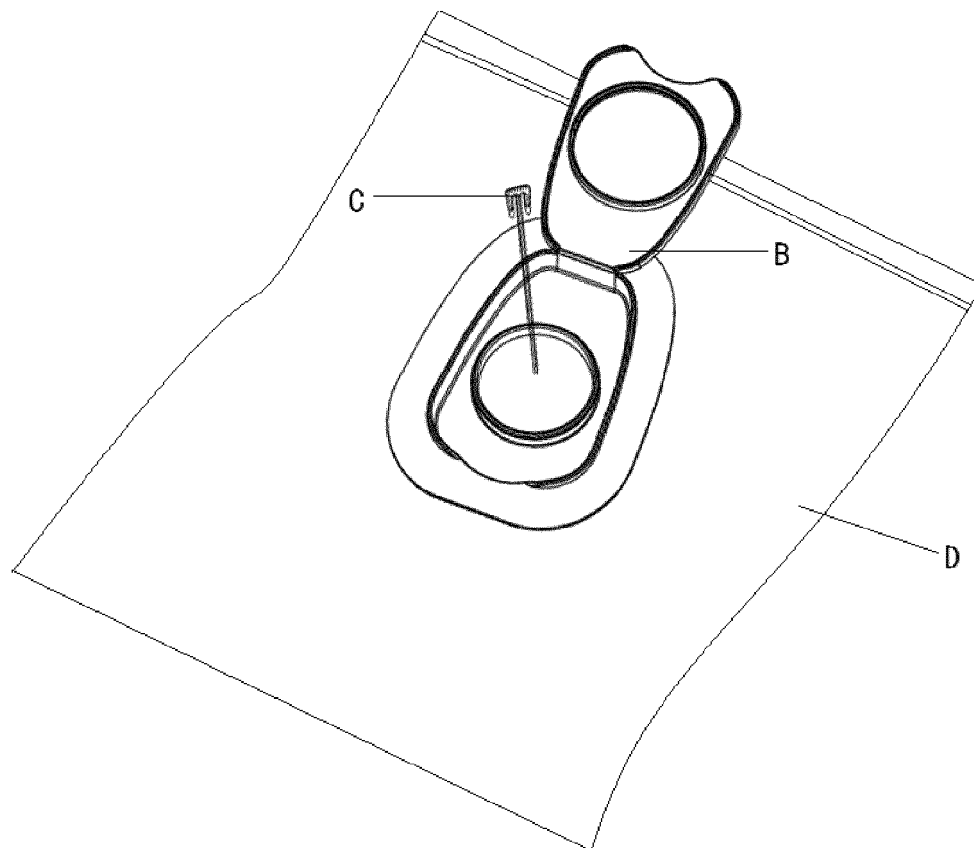


Figure 8

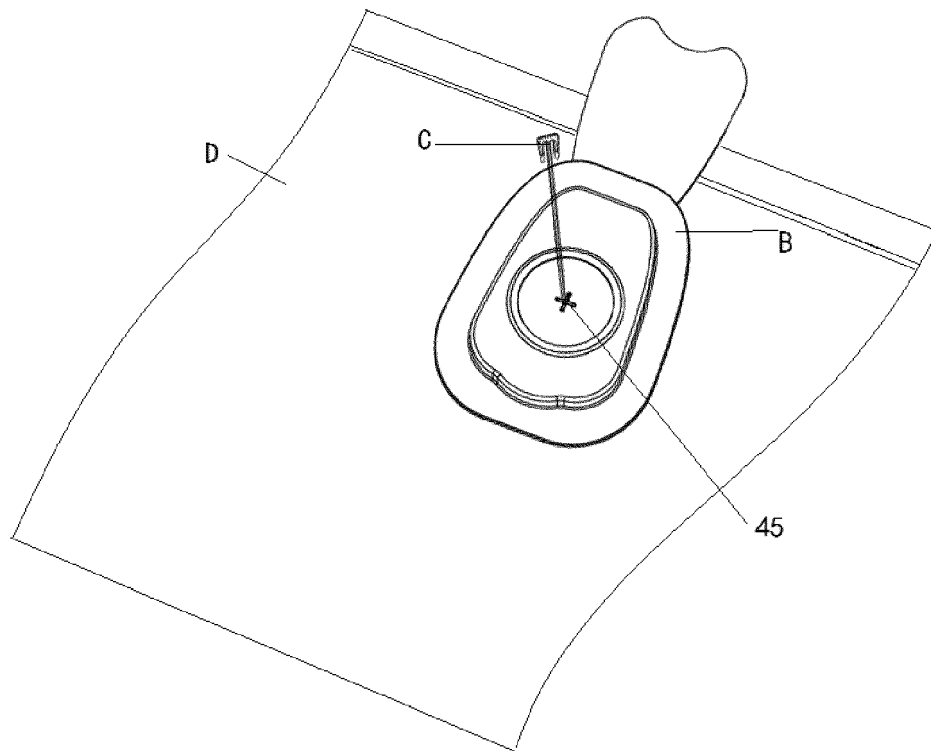


Figure 9



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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 22 July 2021	Examiner Balz, Oliver
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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