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(54) Jar with closure lid and security seal

(57) A jar (V) with closure lid (C) and security seal, in which the seal consists of a profiled piece having an annular portion (7) which is firmly fixed to the lid and another annular portion (8) which becomes fixed to the

jar when the lid with the seal attached is closed for the first time, the seal being broken when the lid is opened for the first time, to leave said two annular portions secured to the lid and to the jar respectively.

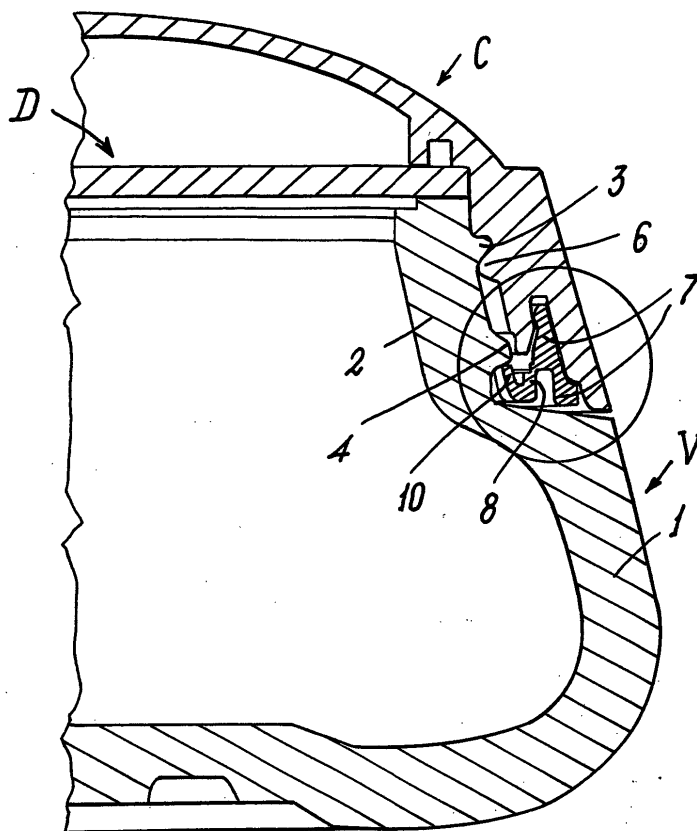


FIG. 2

Description

[0001] The present invention relates to a jar with closure lid and with a security seal which is broken when the lid is opened for the first time.

[0002] The word "jar" as used in this description means either a true jar or a container in general, such as a bottle or the like.

[0003] In many cases, to ensure that the substance contained in the jar has not been tampered with or fraudulently withdrawn, security seals are used which break when the lid closing the jar is opened for the first time. The security seals of known type are usually formed in one piece with the lid or with the neck of the jar and comprise portions which engage profiled portions of the jar neck or lid such that these seals break when the lid is opened for the first time.

[0004] Known security seals have the drawback of requiring the use of very complex moulds for their production, and of leaving ugly pieces of seal on the jar neck (when the lid is removed from it), which can be important if the jar is intended to contain costly products, such as cosmetic creams or the like.

[0005] The main object of the present invention is to provide a jar with closure lid and security seal, which can be produced by much simpler moulds than those currently usable for this purpose, in which the seal consists of a separate piece to be fitted to the lid at any suitable moment, and in which that portion of the seal which remains fixed to the jar neck after breakage of the seal is of small dimensions, of pleasant appearance and of any colour, which can be different from that of the lid and jar and indicative, for example, of the type of product contained in the jar.

[0006] This and further objects are attained by a jar with closure lid and security seal, in which the jar has a neck defining the jar access aperture, the lid is screwable onto said neck to close the jar, and the security seal retains the lid on the neck and is broken when the lid is unscrewed from the neck for the first time, the neck having a free edge and a base, characterised in that an annular rib projects outwards from the neck in proximity to its base, the security seal comprising a first and a second ring joined together by a plurality of breakable appendices, said first ring having a profiled portion firmly engagable in a profiled seat presented by the lid, and said second ring having a plurality of lips projecting towards the ring axis and having their free ends positioned below said annular rib of the neck on which the seal is applied.

[0007] Preferably said profiled seat of the lid consists of an annular recess provided in the free edge of that skirt part of the lid to be superposed on the outer surface of said neck, the profiled portion of said first ring of the seal being forcibly inserted into and retained in said annular recess of the lid.

[0008] The structure and characteristics of the jar with lid and security seal according to the invention will be

more apparent from the ensuing description of one embodiment thereof, given by way of non-limiting example with reference to the accompanying drawings, in which:

- 5 Figure 1 is a partly sectional and partly full frontal view of the jar, the seal and the lid shown aligned but spaced apart;
- Figure 2 is an enlarged section showing a portion of the jar with the lid screwed onto it and with the security seal unbroken;
- 10 Figure 3 shows a portion of Figure 2 on an even larger scale;
- Figure 4 is a section through a portion of the lid after breakage of the seal; and
- 15 Figure 5 is a partly sectional and partly full view of the jar after breakage of the seal and removal of the lid.

[0009] In the drawings, the letter V indicates a jar (for example of glass or plastic material), C a lid (for example of plastic) for closing the jar, S a security seal, and D a seal disc formed of any suitable soft material.

[0010] The jar V has a hollow body 1 from which there extends a neck 2 defining the access aperture of the hollow body 1. From the outer surface of the neck 2 there project spiral threads (for example with three starts) and an annular rib 4 positioned in proximity to the base of the neck, i.e. distant from the free end of the neck. The lid C comprises a skirt 5 to be superposed on the outer surface of the neck 2. From the inner surface of the skirt 5 there project spiral threads (for example with three starts) engagable with the neck threads 3 to enable the lid to be screwed onto (or unscrewed from) the neck 2 to close (or respectively open) the jar.

[0011] In the free edge (i.e. that facing downwards in the drawings) of the skirt 5 of the lid C there is provided a profiled annular recess R clearly visible in Figure 1, and of which the details can be seen from Figure 3. It can be seen that between the lid C and the free edge of the neck 2 of the jar V there is interposed the seal disc D which, when the lid is closed (Figure 2), ensures that the jar is hermetically sealed.

[0012] Finally there is provided the security seal, formed (by moulding plastic material) as a separate piece consisting of a first ring 7 and a second ring 8 joined together by a plurality of breakable appendices 9.

[0013] The first ring 7 has a profiled portion which can be pressed into the annular recess R in the skirt 5 of the lid (Figures 2, 3, 4), where it is securely retained.

[0014] From the lower edge (with respect to the figures) of the second ring 8 there project towards the ring axis a plurality of flexible lips 10 the free ends of which are positioned below the annular rib 4 of the neck 2 onto which the seal is applied (Figures 2, 3 and 5).

[0015] It will be assumed that, after the ring 7 of the seal S has been forced into the recess R in the skirt 5 of the lid, the lid is (for the first time) screwed fully down onto the neck 2 of the jar V. During this first screwing

step, the flexible lips 10 slide (flexing inwards) along the edge of the annular rib 4 of the neck 2, until the free edges of these lips 10 become positioned below the edge 4 (Figures 2 and 3). Under these conditions the lid is locked in its closure position on the jar. When the lid is unscrewed from the neck 2 to open the jar for the first time, the free edges of the lips 10 remain blocked permanently below the rib 4, whereas the seal ring 7 is dragged upwards (with respect to the figures) by the lid, to break the appendices 9 and enable the jar to be opened.

[0016] The seal ring 7 hence remains fixed to the lid C and stays practically hidden within the recess R of the lid (Figure 4), whereas the ring 8 (which is of small dimensions) remains positioned below the edge 4 of the jar, providing a possible decorative effect.

[0017] The jar, the lid and the seal are produced separately by fairly simple moulds. The seal S can either be supplied to the user firm already assembled within the lid, or be fitted into it by the user firm. In this respect it can happen that the same lid C is used to close jars V of identical form but containing different products (for example cosmetic creams), which can be easily identified by simply observing the portion of the ring 8 which remains fixed to the neck of the jar 2 after the seal has been broken and the lid removed. The seals can be made of different colours according to the requirements of the user firms, in order to identify (on the basis of the seal colour) the product contained in the jar.

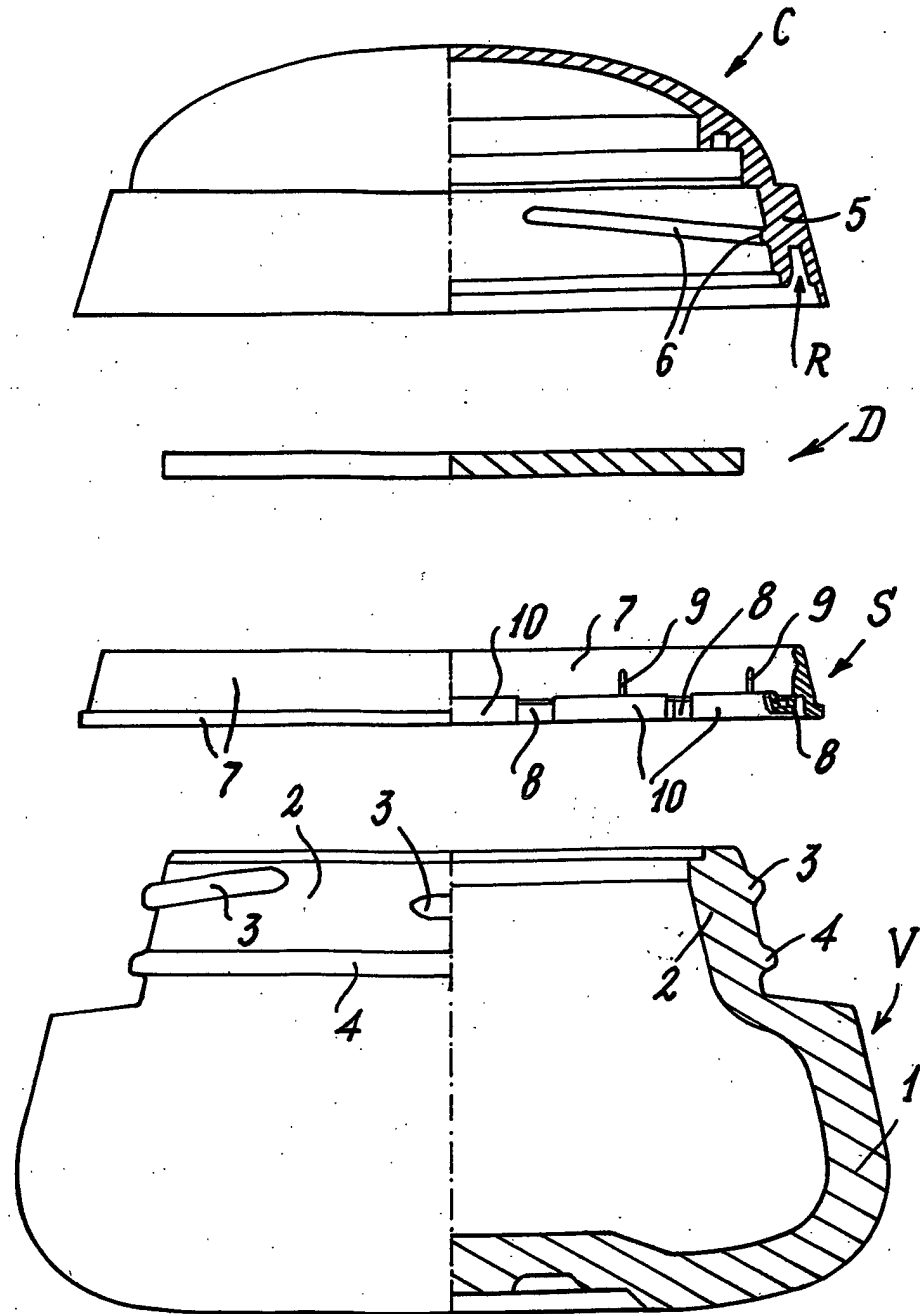
(S) being forcedly inserted into and retained in said annular recess (R) of the lid (C).

3. A jar with lid and seal as claimed in claims 1 and 2, **characterised in that** said lips (10) project from the lower edge of the second ring (8).

Claims

1. A jar (V) with closure lid (C) and security seal (S), in which the jar (V) has a neck (2) defining the jar access aperture, the lid is screwable onto said neck (2) to close the jar, and the security seal (S) retains the lid (C) on the neck (2) and is broken when the lid is unscrewed from the neck (2) for the first time, the neck (2) having a free edge and a base, **characterised in that** an annular rib (4) projects outwards from the neck in proximity to its base, the security seal (S) comprising a first and a second ring (7,8) joined together by a plurality of breakable appendices (9), said first ring (7) having a profiled portion firmly engageable in a profiled seat (R) presented by the lid (C), and said second ring (8) having a plurality of lips (10) projecting towards the ring axis and having their free ends positioned below said annular rib (4) of the neck (2) on which the seal (S) is applied.
2. A jar with lid and seal as claimed in claim 1, **characterised in that** said profiled seat of the lid (C) consists of an annular recess (R) provided in the free edge of that skirt part (5) of the lid (C) to be superposed on the outer surface of said neck (2), the profiled portion of said first ring (7) of the seal

FIG. 1



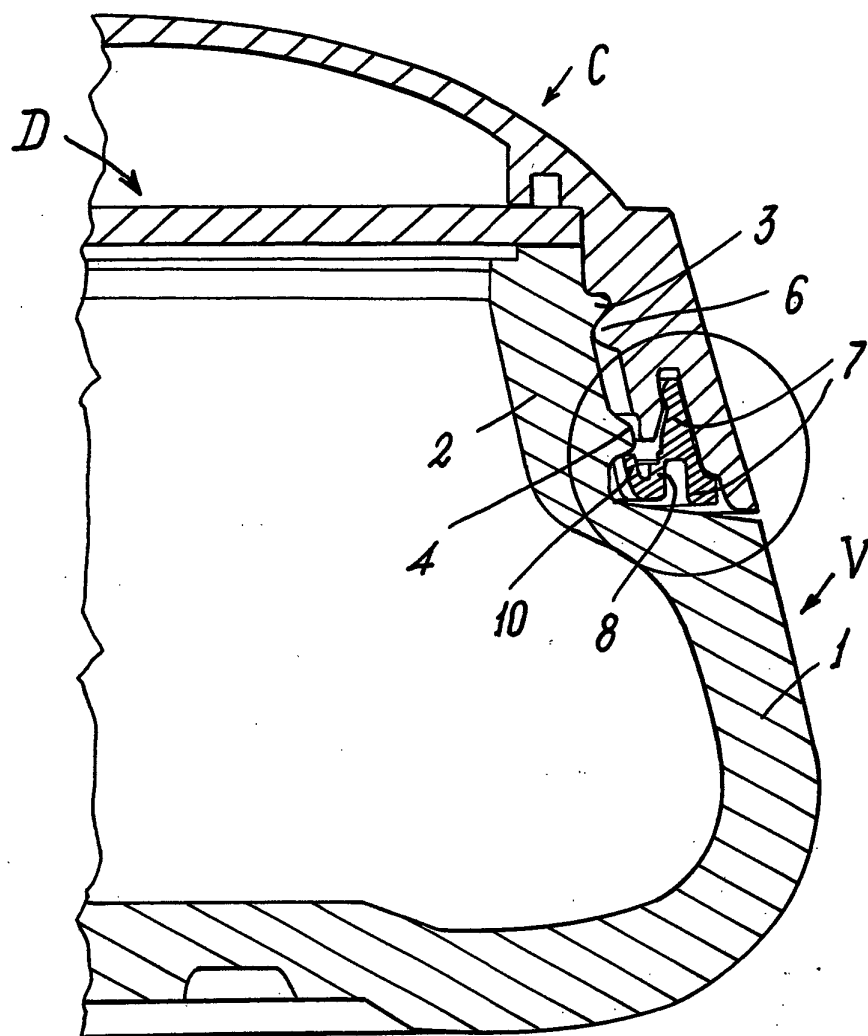


FIG. 2

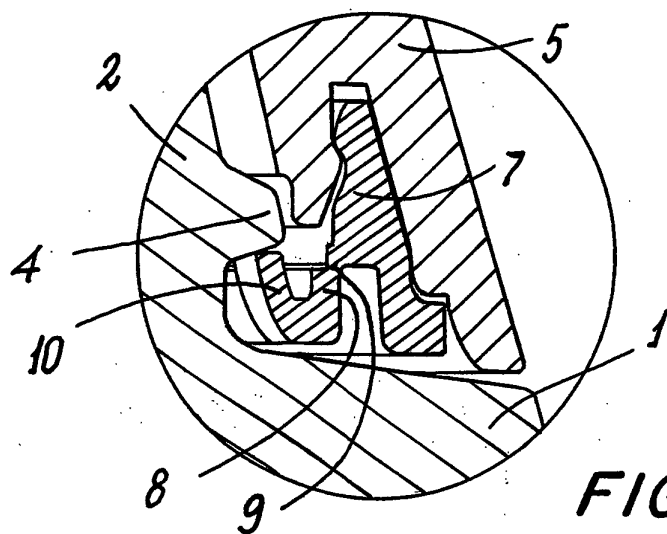


FIG. 3

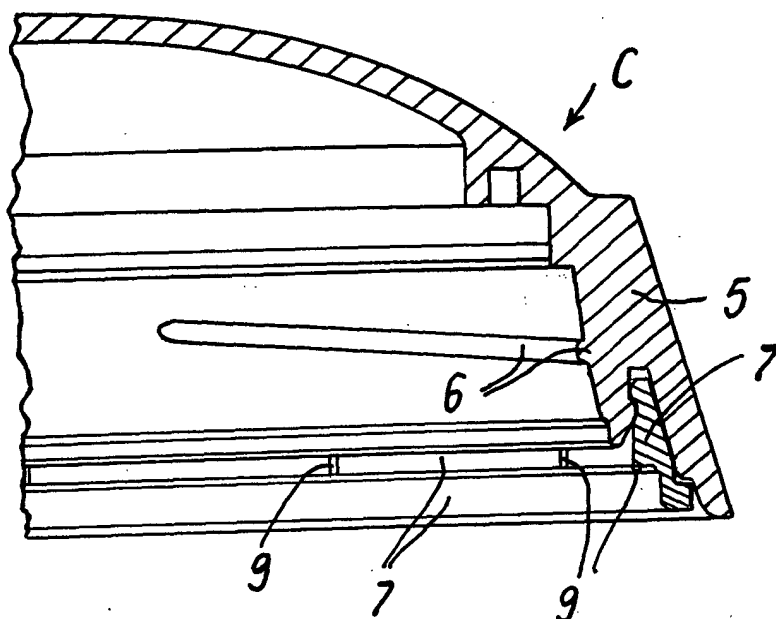


FIG. 4

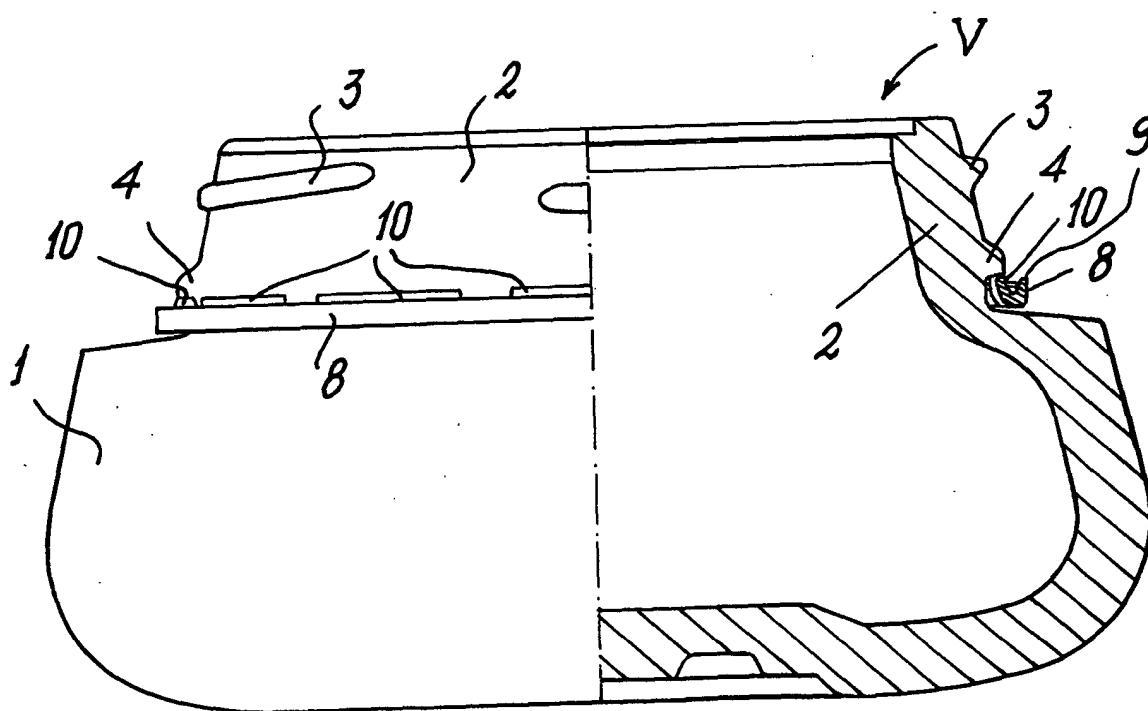


FIG. 5