

CLAIMS

1. A device (100) for packaging and dispensing a product, generally a liquid or gel product, comprising:

5 - a container (1) delimiting an internal volume (V) and intended to contain the product (2),

 - a dispensing head (7), provided with a dispensing end (7a) and an actuating part (7b), to dispense a portion or dose of the product;

10 - a mounting interface (27) belonging to the dispensing head (7) and adapted to be fixed onto the container (1) by a fixing portion (20);

 - an assembly (11, 12) for refilling and filtering air, said assembly (11, 12) comprising an outer air intake orifice (10; 10') and a check valve (12) allowing air entering through the outer orifice (10; 10') to penetrate the internal volume (V) after a product dispensing;

 characterized in that the outer orifice (10; 10') is formed at a distance from a bottom (1a) of the container (1),
20 the assembly (11, 12) for refilling and filtering air comprising a filter element (11) which is:

 - mounted in the dispensing head (7);
 - placed in an air circulation duct (16; 16') which extends between the outer orifice (10; 10') and the check
25 valve (12); and

 - at a distance and offset inwardly from both of the container (1) and said fixing portion (20).

2. The device according to claim 1, wherein the
30 dispensing end (7a) extends along a longitudinal direction, the filter element (11) being mounted in the dispensing head

(7) axially aligned with the dispensing end (7a) along said longitudinal direction.

3. The device according to any one of claims 1 and 2,
5 wherein the air circulation duct (16; 16') is tubular and the filter element (11) has a circular cross-section with dimensions to be mounted within a circular inner section of the tubular air circulation duct (16; 16').

10 4. The device according to any one of claims 1 to 3, wherein the dispensing head (7) comprises a dosing chamber (5) and a partition element separating the dosing chamber (5) from the internal volume (V), the partition element being preferably in the form of a rigid part (3), a central cavity
15 being formed by the partition element to allow housing and/or attaching the filter element (11), the central cavity constituting all or part of an end of said air circulation duct (16; 16').

20 5. The device according to any one of claims 1 to 4, wherein the container (1) has an opening (O1) opposite the bottom (1a), and a side wall extending about a longitudinal axis (X), the mounting interface (27) being fixed onto the container (1) on the side of its opening (O1) and extending
25 annularly about the longitudinal axis (X), said fixing portion (20) being annular to define a preferably radial, sealed annular contact (C1) against the container (1).

6. The device according to any one of claims 1 to 5,
30 wherein the outer orifice (10) forms a lateral outlet of the air circulation duct (16) through an outer wall of the dispensing head (7), so that an entry section of the air circulation duct (16) extends radially toward the filter element (11).

7. The device according to any one of claims 1 to 5, wherein the air circulation duct (16') comprises an entry section which extends axially between:

- the outer orifice (10');
- 5 - and a duct (16') widening area located upstream of the filter element (11) in the inflow direction of the circulation of air.

8. The device according to claim 7, wherein the outer
10 orifice (10') forms an axial inlet of the air circulation duct (16') through the dispensing end (7a), the duct (16') being formed by a rigid tubular element formed in one piece.

9. The device according to any one of claims 1 to 8, wherein the filter element (11) is mounted in the dispensing
15 head (7) and arranged to be placed in the internal volume (V) of the container, preferably beyond the fixing portion (20).

10. The device according to any one of claims 1 to 9, wherein the filter element (11) is mounted on the side of an
20 inner face of the dispensing head (7) which extends opposite the dispensing end (7a).

11. The device according to any one of claims 1 to 10, wherein the filter element (11) is mounted internally in a
25 recess of the check valve (12).

12. The device according to any one of claims 1 to 11, wherein the check valve (12) comprises an elastically deformable piece which forms a flap extended by a female
30 element, the female element being sealingly connected to a tubular male portion belonging to the dispensing head (7).

13. The device according to claim 12, wherein the tubular male portion is part of a partition element which separates

said internal volume (V) from a dosing chamber (5), the tubular male portion being integrally formed with a rigid inner rod of the dispensing head (7) which extends to the dispensing end (7a).

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14. The device according to any one of claims 1 to 13, further comprising a removable cover (15) adapted to cover both the dispensing head (7) and the outer orifice (10, 10').

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15. The device according to any one of claims 1 to 13, comprising a removable cover (15) adapted to be fixed to the mounting interface (27) so as to cover the dispensing head (7) and close the outer orifice (10; 10').