

CLAIMS:

1. Coupling assembly (10) configured to be used in a personal care appliance (1) at an interface between a body (2) and a head (3) of the personal care appliance (1) for releasably coupling the body (2) and the head (3),

5 wherein the coupling assembly (10) comprises a coupling element (52) and a retaining member (42) having a receiving space (43) which is configured to receive and accommodate the coupling element (52),

wherein one of the coupling element (52) and the retaining member (42) comprises at least one cam element (54, 55) projecting in a direction of a central axis (11) of the coupling assembly (10) and another of the coupling element (52) and the retaining member (42) comprises at least one notch (45, 46) which is configured to receive and accommodate the at least one cam element (54, 55) so as to constitute at least one coupling combination,

15 wherein, in a peripheral direction about the central axis (11), the at least one cam element (54, 55) has two oppositely sloped surfaces (56, 57) converging in a direction from a base to a furthest projecting end of the at least one cam element (54, 55), and the at least one notch (45, 46) has two oppositely sloped surfaces (47, 48) converging in a direction from an open side to a deepest side of the at least one notch (45, 46) so as to allow release of a coupled position of the coupling assembly (10) on the basis of a rotation of the coupling element (52) and the retaining member (42) with respect to each other about the central axis (11), and

20 wherein, in the at least one coupling combination, the cam element (54, 55) and the notch (45, 46) are configured to leave space between them at the position of a furthest projecting non-contact portion (55b) of the cam element (54, 55) and an associated deepest non-contact portion (46b) of the notch (46) and to only contact each other at two sides through their sloped surfaces (47, 48; 56, 57) at the position of a less projecting contact portion (55a) of the cam element (54, 55) and an associated less deep contact portion (46a) of the notch (45, 46) in the coupled position of the coupling assembly (10).

2. Coupling assembly (10) according to claim 1, wherein, in the at least one coupling combination, each of the sloped surfaces (47, 48; 56, 57) of at least one of the cam element (54, 55) and the notch (45, 46) comprises at least two portions (48a, 48b) which are different as far as their sloping orientation is concerned.

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3. Coupling assembly (10) according to claim 1 or 2, wherein, in the at least one coupling combination, at least in the non-contact portion (55b) of the cam element (54, 55) and the associated non-contact portion (46b) of the notch (45, 46), the two oppositely sloped surfaces (56, 57) of the cam element (54, 55) converge more strongly than the two oppositely sloped surfaces (47, 48) of the notch (45, 46).

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4. Coupling assembly (10) according to any of claims 1-3, wherein, in the at least one coupling combination, a dimension of the non-contact portion (55b) of the cam element (54, 55) in the direction of the central axis (11) is smaller than a dimension of the associated non-contact portion (46b) of the notch (45, 46) in the direction of the central axis (11).

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5. Coupling assembly (10) according to any of claims 1-4, wherein, in the direction of the central axis (11), a dimension of the contact portion (55a) of the cam element (54, 55) is smaller than a dimension of the non-contact portion (55b) of the cam element (54, 55), and a dimension of the contact portion (46a) of the notch (45, 46) is smaller than a dimension of the non-contact portion (46b) of the notch (45, 46).

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6. Coupling assembly (10) according to any of claims 1-5, comprising a biasing mechanism which is configured to exert a force acting in the direction of the central axis (11) to bias the coupling element (52) inward in the retaining member (42).

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7. Coupling assembly (10) according to any of claims 1-6, comprising a snap connection mechanism which is configured to provide a snap connection at an interface of the coupling element (52) and the retaining member (42) in the coupled position of the coupling assembly (10), and which includes at least one set of a snap connection area (31, 32) and a resilient snap connection element (15) which is configured to engage with the snap connection area (31, 32).

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8. Coupling assembly (10) according to any of claims 1-7, wherein the retaining member (42) comprises a spring element (15) which is at least partially located in the receiving space (43).

5 9. Coupling assembly (10) according to claim 8, wherein the spring element (15) is generally U-shaped, including a basis (16) and two legs (17) extending from the basis (16), and wherein at least a portion of each of the legs (17) is located in the receiving space (43).

10 10. Coupling assembly (10) according to claim 8 or 9, wherein the coupling element (52) is provided with at least two indentations (31, 32) which are configured to receive and accommodate at least two portions of the spring element (15) so as to allow the spring element (15) to engage with the coupling element (52) in the coupled position of the coupling assembly (10).

15 11. Coupling assembly (10) according to any of claims 1-10, including two cam elements (54, 55) and two notches (45, 46), wherein, in the peripheral direction about the central axis (11), one of the cam elements (54, 55) and one of the notches (45, 46) are small relative to another of the cam elements (54, 55) and another of the notches (45, 46) so as to realize a coupling combination of a cam element (54, 55) and a notch (45, 46) of relatively
20 small size and a coupling combination of a cam element (54, 55) and a notch (45, 46) of relatively large size in the coupling assembly (10).

12. Coupling assembly (10) according to claim 11, wherein the two cam elements (54, 55) and the two notches (45, 46), respectively, are diametrically opposed to each other
25 about the central axis (11).

13. Personal care appliance (1) comprising a body (2), a head (3) and a coupling assembly (10) according to any of claims 1-12, wherein the coupling assembly (10) is located at an interface between the body (2) and the head (3) for releasably coupling the body (2) and
30 the head (3).

14. Personal care appliance (1) according to claim 13, wherein the coupling element (52) of the coupling assembly (10) is included in the head (3), and wherein, in the

coupled position of the coupling assembly (10), the head (3) is solely supported by the coupling element (52).

15. Personal care appliance (1) according to claim 13 or 14, being a shaving
5 appliance (1), wherein the head (3) is configured to support at least two rotary shaving units
 (6).