

CLAIMS:

1. A shaving system (10) comprising a shaving device (12), a cleaning device (14) and a processing unit (22), wherein:
- the shaving device (12) comprises a main body (94) accommodating a motor (77), a shaving unit (38) coupled to the main body and an orientation sensor (20) for
- 5 generating an output signal representing the orientation of the shaving device;
- the cleaning device (14) comprises a supporting structure (15) for supporting the shaving device (12) in a cleaning position for cleaning the shaving unit, the shaving device having a predefined cleaning orientation in said cleaning position; and
- the processing unit (22) is adapted to control the cleaning device to operate
- 10 according to a predefined cleaning program for cleaning the shaving unit,
- characterized in that the processing unit (22) is adapted to:
- receive the output signal generated by the orientation sensor (20); and
- control the cleaning device (14) to operate according to the predefined cleaning program when the orientation sensed by the orientation sensor
- 15 corresponds to said predefined cleaning orientation.
2. A shaving system (10) as claimed in claim 1, wherein the processing unit (22) is adapted to control the cleaning device (14) to operate according to the predefined cleaning program when the orientation sensed by the orientation sensor (20) is any orientation within a
- 20 predefined range of angular orientations relative to the cleaning orientation.
3. A shaving system (10) as claimed in claim 2, wherein:
- the shaving device (12) further comprises a motion sensor (21) for generating an output signal representing motion of the shaving device; and
- 25 the processing unit (22) is adapted to receive the output signal generated by the motion sensor and to control the cleaning device (14) to operate according to the predefined cleaning program when the orientation sensed by the orientation sensor (20) is any orientation within said predefined range of angular orientations and the motion sensor senses no movement for a first predefined time period.

4. A shaving system (10) as claimed in claim 2 or 3, wherein the processing unit (22) is adapted:

to pause the predefined cleaning program, after being started, when the orientation sensed by the orientation sensor (20) is outside the predefined range of angular orientations;

to cancel the predefined cleaning program, after being paused, when the orientation sensed by the orientation sensor is outside the predefined range of angular orientations for more than a second predefined time period, and then implement a power-off function of the shaving system (10); and

to resume the predefined cleaning program, after being paused, when the orientation sensed by the orientation sensor is again within the predefined range of angular orientations before expiry of said second predefined time period.

5. A shaving system (10) as claimed in any one of claims 1 to 4, wherein the cleaning device (14) comprises a reservoir (32) for holding a cleaning fluid and a pump (48) for circulating the cleaning fluid.

6. A shaving system (10) as claimed in claim 5, wherein:

the shaving device (12) further comprises a drive coupling (82) which is accessible from an outside of the shaving device (12) and drivable by the motor (77); and the cleaning device (14) comprises a driven coupling (30) for mechanical connection to the drive coupling (82) of the shaving device (12) when the shaving device is in the cleaning position, such that the motor of the shaving device provides mechanical driving of the pump (48) of the cleaning device;

the processing unit (22) is accommodated in the main body (94) of the shaving device (12) and is adapted to control the motor (77) of the shaving device according to the predetermined cleaning program when the orientation sensed by the orientation sensor (20) corresponds to said predefined cleaning orientation, such that the cleaning device (14) is driven by the motor (77) to operate according to the predetermined cleaning program when the shaving device is in the cleaning position.

7. A shaving system (10) as claimed in claim 6, wherein:

the shaving device (12) comprises a user input device (95) for receiving a power-on input (P_on) from a user;

the processing unit (22) is adapted to receive the power-on input from the user input device; and

the processing unit is adapted to start the motor (77) of the shaving device (12) to operate according to a shaving program unless or until the processing unit starts the motor
5 to operate according to the predefined cleaning program.

8. A shaving system (10) as claimed in claim 6 or 7, wherein the cleaning device (14) is a purely mechanical system.

10 9. A shaving system as claimed in any one of claims 1 to 5, wherein the processing unit is part of the cleaning device.

10. A shaving device (12) for use in a shaving system (10) comprising the shaving device and a cleaning device (14) as claimed in any one of claims 1 to 8, comprising:

15 a main body (94) accommodating a motor (77);
a shaving unit (38) coupled to the main body (94);
an orientation sensor (20) for generating an output signal representing the orientation of the shaving device (12);
a drive coupling (82) which is accessible from an outside of the shaving device
20 (12) and drivable by the motor (77); and

a processing unit (22) adapted to receive the output signal generated by the orientation sensor (20);
characterized in that the processing unit (22) is further adapted to control the motor (77) to operate according to a predefined cleaning program for the cleaning device (14) when the
25 orientation sensed by the orientation sensor (20) corresponds to a predefined cleaning orientation of the shaving device (12) such that, when the shaving device has said predefined cleaning orientation when being supported in a cleaning position by the cleaning device with the drive coupling (82) coupled to a driven coupling (30) of the cleaning device, the cleaning device (14) is driven by the motor (77) to clean the shaving unit (38) according to the
30 cleaning program.

11. A shaving device (12) as claimed in claim 10, wherein the processing unit (22) is adapted to:

control the motor (77) to operate according to the predefined cleaning program

when the orientation sensed by the orientation sensor (20) is any orientation within a predefined range of angular orientations relative to the cleaning orientation.

12. A shaving device (12) as claimed in claim 11, wherein:

5 the shaving device (12) further comprises a motion sensor (21) for generating an output signal representing motion of the shaving device; and

the processing unit (22) is adapted to receive the output signal generated by the motion sensor and to control the motor (77) to operate according to the predefined cleaning program when the orientation sensed by the orientation sensor (20) is any
10 orientation within said predefined range of angular orientations and the motion sensor senses no movement for a predefined time period.

13. A cleaning method for cleaning a shaving unit (38) of a shaving device (12), using a cleaning device (14) which comprises a supporting structure (15) for supporting the
15 shaving device (12) in a cleaning position for cleaning the shaving unit, the shaving device having a predefined cleaning orientation in said cleaning position, wherein the shaving device comprises a main body (94) accommodating a motor (77), said shaving unit (38) being coupled to the main body, and an orientation sensor (20) for generating an output signal representing the orientation of the shaving device, the method comprising controlling
20 the cleaning device (14) to operate according to a predefined cleaning program for cleaning the shaving unit (38),
characterized in that the method further comprises:

receiving the output signal generated by the orientation sensor (20) of the shaving device (12);

25 detecting whether the shaving device is in the cleaning orientation based on the output signal of the orientation sensor; and

controlling the cleaning device (14) to operate according to a predefined cleaning program when the orientation sensed by the orientation sensor corresponds to said predefined cleaning orientation.

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14. A cleaning method as claimed in claim 13, wherein controlling the cleaning device (14) comprises:

mechanically connecting a drive coupling (82) of the shaving device (12) to a driven coupling (30) of the cleaning device (14);

driving the drive coupling by means of the motor (77) of the shaving device (12); and

controlling the motor such that the motor drives the cleaning device to operate according to the predefined cleaning program.

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15. A computer program comprising computer program code means which is adapted, when said program is run on a computer, to implement the method of claim 13 or 14.