Claims

We claim,

1. A method for dispensing moisturizer towards one or more portions of a body, the method comprising:

receiving an instruction from a controller unit of a smart wearable device to release a predetermined amount of the moisturizer to the one or more portions of the body;

determining, by a controller unit of a dispensation unit, at least one outlet port of a dispensing container to release the predetermined amount of the moisturizer thereof;

actuating a first opener coupled to the at least one outlet port of the dispensing container;

activating at least one actuating mechanism to apply force on an external surface of the dispensing container to release the predetermined amount of the moisturizer from the first opener to the one or more portions of the body through the at least one outlet port and the at least one guiding channel; wherein the at least one guiding channel has an inlet coupled to the at least one outlet port of the dispensing container and an outlet disposed near the one or more portions of the body; and

releasing the moisturizer to the one or more portions of the body.

2. The method as claimed in claim 1, further comprising:

releasing the moisturizer to the one or more portions of the body in accordance with a pre-defined time and frequency respectively set for the moisturizer release, wherein said time and frequency respectively are pre-defined based on at least one of: type of a skin of a user and an environmental condition.

3. The method as claimed in claim 1, further comprising:

monitoring, by the controller of the dispensation unit, an output of a flow control sensor;

computing a quantity of the moisturizer already released from the dispensing container based on at least the output of the flow control sensor; and

deactivating the at least one actuating mechanism to stop further release of the moisturizer from the dispensing container, when the computed quantity of the moisturizer is equivalent to the predetermined amount of the moisturizer.

4. The method as claimed in claim 1, wherein activating the at least one actuating mechanism comprising:

actuating a first motor causing a rotational movement of a first spindle and a second spindle over the external surface of the dispensing container; and

releasing the moisturizer from the dispensing container in accordance with the rotational movement of the first spindle and the second spindle.

5. The method as claimed in claim 1, wherein the dispensation unit is configured on at least one item adapted to be worn by a user in a manner such that the outlet of the at least one guiding channel faces skin of the user.

6. The method as claimed in claim 1, wherein the controller unit of the dispensation unit is a central controller unit configured to communicatively couple to a plurality of controller units of a plurality of dispensation units respectively.

7. The method as claimed in claim 6, further comprising:

selecting the dispensing container by the central controller unit to release the moisturizer, wherein the dispensing container is selected from dispensing containers of the plurality of dispensation units.

8. A dispensation unit for dispensing moisturizer towards one or more portions of a body, the dispensation unit comprising:

a controller unit configured to receive an instruction from a controller unit of a smart wearable device to release a predetermined amount of the moisturizer to the one or more portions of the body;

a dispensing container disposed within the dispensation unit, wherein the dispensing container comprises at least one outlet port to release the predetermined amount of the moisturizer thereof;

a first opener coupled to the at least one outlet port of the dispensing container, wherein the controller unit of the dispensation unit is configured to actuate the first opener to release the moisturizer from the dispensing container; and

at least one actuating mechanism, upon activation configured to apply force on an external surface of the dispensing container to release the predetermined amount of

the moisturizer from the first opener to said one or more portions of the body through the at least one outlet port and at least one guiding channel; wherein the at least one guiding channel has an inlet coupled to the at least one outlet port of the dispensing container and an outlet disposed near to said one or more portions of the body; wherein the controller unit of the dispensation unit is configured to activate the at least one actuating mechanism to release the moisturizer to said one or more portions of the body.

9. The dispensation unit as claimed in claim 8, wherein the controller unit of the dispensation unit is further configured to:

release the moisturizer to the one or more portions of the body in accordance with a pre-defined time and frequency respectively set for the moisturizer release, wherein said time and frequency respectively are pre-defined based on at least one of: type of a skin of a user and an environmental condition.

10. The dispensation unit as claimed in claim 8, further comprising:

a flow control sensor to determine amount of the moisturizer released from the dispensing container; wherein the controller unit of the dispensation unit is configured to monitor an output of the flow control sensor and compute quantity of the moisturizer already released from the dispensing container and deactivate the at least one actuating mechanism to stop further release of the moisturizer from the dispensing container, when the computed quantity of the moisturizer is equivalent to the predetermined amount of the moisturizer.

11. The dispensation unit as claimed in claim 8, wherein the at least one actuating mechanism comprises a first motor coupled to a first spindle and a second spindle, through at least three interlocked gears, wherein the controller unit of the dispensation unit is configured to:

actuate the first motor to cause a rotational movement of the first spindle and the second spindle over the external surface of the dispensing container; and

release the moisturizer from the dispensing container in accordance with the rotational movement of the first spindle and the second spindle.

12. The dispensation unit as claimed in claim 11, wherein the controller unit of the dispensation unit is configured to control speed and rotational direction of the first motor to control release of the moisturizer from the dispensing container.

13. The dispensation unit as claimed in claim 8, further comprising a plurality of dispensing containers, wherein an outlet port of each of the dispensing containers is coupled to a respective inlet port of a connecting pipe, wherein the connecting pipe includes at least one moisturizer releasing port coupled to a respective inlet port of the at least one guiding channel.

14. The dispensation unit as claimed in claim 8, further comprising a housing adapted to be disposed on at least one item adapted to be worn by a user in a manner such that the outlet of the at least one guiding channel faces skin of the user.

15. The dispensation unit as claimed in claim 8, wherein the controller unit of the dispensation unit is a central controller unit configured to communicatively couple to a plurality of controller units of a plurality of dispensation units respectively.

16. The dispensation unit as claimed in claim 15, wherein the central controller unit is configured to select the dispensing container from the dispensing containers of the plurality of dispensation units to release the moisturizer to the one or more portions of the body.

17. The dispensation unit as claimed in claim 8, further comprising:

a second opener coupled to the dispensing container, wherein an empty space between the first opener and the second opener acts as a reservoir of the moisturizer and a filled state of the empty space facilitates release of the moisturizer with a relatively higher pressure.

18. A system for dispensing moisturizer towards one or more portions of a body, the system comprising:

a smart wearable device comprising:

a scheduler configured to determine a release time for the moisturizer, a predetermined quantity of the moisturizer, and said one or more portions of the body to release the moisturizer thereof; and

a first controller unit configured to communicate an instruction to release the moisturizer based on determination of the scheduler; and

a dispensation unit comprises:

a second controller unit configured to receive the instruction from the first controller unit to release the predetermined amount of the moisturizer to said one or more portions of the body;

a dispensing container comprises at least one outlet port to release the predetermined amount of the moisturizer thereof;

a first opener coupled to the at least one outlet port of the dispensing container, wherein the second controller unit is configured to actuate the first opener to release the moisturizer from the dispensing container; and

at least one actuating mechanism, upon activation, configured to apply force on an external surface of the dispensing container to release the predetermined amount of the moisturizer from the first opener to the one or more portions of the body through at least one guiding channel; wherein the at least one guiding channel has an inlet coupled to the at least one outlet port of the dispensing container and an outlet disposed near the one or more portions of the body; wherein the second controller unit is configured to activate the at least one actuating mechanism to release the moisturizer to one or more portions of the body.

19. The system as claimed in claim 18, wherein the smart wearable device comprises a sensor module to monitor physical and physiological parameters of a user and environmental parameters of a location of the user.

20. The system as claimed in claim 18, further includes an application server configured to process, store and retrieve user profile related information and environmental related information to determine requirement of releasing the moisturizer to the one or more portions the body.

Claims

We claim,

1. A method for dispensing moisturizer towards one or more portions of a body, the method comprising:

determining nature, present condition of user's skin and quality of the user's skin through sensor data by using a controller (112) of a smart wearable device (102), wherein the sensor data is received from a plurality of sensor including a temperature sensor, conductance sensor, moisture sensor and ultraviolet radiation sensor;

receiving an instruction from the controller unit (112) of the smart wearable device (102) to release a predetermined amount of the moisturizer to the one or more portions of the body;

determining, by a controller unit of a dispensation unit (104), at least one outlet port (1108) of a dispensing container (136) to release the predetermined amount of the moisturizer thereof;

actuating a first opener (1010) coupled to the at least one outlet port (1108) of the dispensing container (136);

activating at least one actuating mechanism to apply force on an external surface of the dispensing container (136) to release the predetermined amount of the moisturizer from the first opener (1010) to the one or more portions of the body through the at least one outlet port and the at least one guiding channel (1016), wherein the at least one guiding channel (1016) has an inlet coupled to the at least one outlet port (1108) of the dispensing container (136) and an outlet disposed near the one or more portions of the body, wherein the at least one actuating mechanism comprises a motor (1142) coupled to a first spindle (1120a) and a second spindle (1120b), through at least three interlocked gears, wherein activating the at least one actuating mechanism comprising:

actuating the motor (1142) causing a rotational movement of the first spindle (1120a) and the second spindle (1120b) over external surface of the dispensing container (136), wherein rotation of first gear (1152) in an anti-clock wise direction causes rotational movement of a second gear (1154) and third gear (1156) in a clock-wise direction, wherein the first spindle (1120a) and the second spindle (1120b) mechanically attached to the second gear (1154) and the third gear (1156) respectively, rotate in the clockwise direction which causes a force on the dispensing container (136);

releasing the moisturizer from the dispensing container (136) in accordance with the rotational movement of the first spindle (1120a) and the second spindle (1120b); and

releasing the moisturizer to the one or more portions of the body.

2. The method as claimed in claim 1, further comprising: releasing the moisturizer to the one or more portions of the body in accordance with a pre-defined time and frequency respectively set for the moisturizer release, wherein said time and frequency respectively are pre-defined based on at least one of: type of a skin of a user and an environmental condition.
3. The method as claimed in claim 1, further comprising: monitoring, by the controller of the dispensation unit (104), an output of a flow control sensor (1110);

   computing a quantity of the moisturizer already released from the dispensing container (136) based on at least the output of the flow control sensor (1110); and

   deactivating the at least one actuating mechanism to stop further release of the moisturizer from the dispensing container (136), when the computed quantity of the moisturizer is equivalent to the predetermined amount of the moisturizer.
4. The method as claimed in claim 1, wherein the dispensation unit (104) is configured on at least one item adapted to be worn by a user in a manner such that the outlet of the at least one guiding channel faces skin of the user.
5. The method as claimed in claim 1, wherein the controller unit of the dispensation unit (104) is a central controller unit configured to communicatively couple to a plurality of controller units of a plurality of dispensation units respectively.
6. The method as claimed in claim 5, further comprising: selecting the dispensing container (136) by the central controller unit to release the moisturizer, wherein the dispensing container (136) is selected from dispensing containers of the plurality of dispensation units.
7. A dispensation unit for dispensing moisturizer towards one or more portions of a body, the dispensation unit comprising:

   a controller (132) unit configured to receive an instruction from a controller unit of a smart wearable device (102) to release a predetermined amount of the moisturizer to the one or more portions of the body;

   a dispensing container (136) disposed within the dispensation unit (104), wherein the dispensing container (136) comprises at least one outlet port to release the predetermined amount of the moisturizer thereof;

   a first opener (1010) coupled to the at least one outlet port of the dispensing container (136), wherein the controller unit of the dispensation unit (104) is configured to actuate the first opener (1010) to release the moisturizer from the dispensing container (136); and

at least one actuating mechanism, upon activation configured to apply force on an external surface of the dispensing container (136) to release the predetermined amount of the moisturizer from the first opener (1010) to said one or more portions of the body through the at least one outlet port and at least one guiding channel (1016), wherein the at least one guiding channel (1016) has an inlet coupled to the at least one outlet port of the dispensing container (136) and an outlet disposed near to said one or more portions of the body, wherein the controller unit of the dispensation unit (104) is configured to activate the at least one actuating mechanism to release the moisturizer to said one or more portions of the body, wherein the at least one actuating mechanism comprises a first motor coupled to a first spindle (1120a) and a second spindle (1120b), through at least three interlocked gears, wherein the controller unit of the dispensation unit (104) is configured to:

actuate the first motor to cause a rotational movement of the first spindle (1120a) and the second spindle (1120b) over the external surface of the dispensing container (136), wherein rotation of first gear (1152) in an anti-clock wise direction causes rotational movement of a second gear (1154) and third gear (1156) in a clock-wise direction, wherein the first spindle (1120a) and the second spindle (1120b) mechanically attached to the second gear (1154) and the third gear (1156) respectively, rotate in the clockwise direction which causes a force on the dispensing container (136); and

release the moisturizer from the dispensing container (136) in accordance with the rotational movement of the first spindle (1120a) and the second spindle (1120b).

8. The dispensation unit as claimed in claim 7, wherein the controller unit of the dispensation unit (104) is further configured to:

release the moisturizer to the one or more portions of the body in accordance with a pre-defined time and frequency respectively set for the moisturizer release, wherein said time and frequency respectively are pre-defined based on at least one of: type of a skin of a user and an environmental condition.

9. The dispensation unit as claimed in claim 7, further comprising:

a flow control sensor (1110) to determine amount of the moisturizer released from the dispensing container (136); wherein the controller unit of the dispensation unit (104) is configured to monitor an output of the flow control sensor (1110) and compute quantity of the moisturizer already released from the dispensing container (136) and deactivate the at least one actuating mechanism to stop further release of the moisturizer from the

dispensing container (136), when the computed quantity of the moisturizer is equivalent to the predetermined amount of the moisturizer.

10. The dispensation unit as claimed in claim 7, wherein the controller unit of the dispensation unit (104) is configured to control speed and rotational direction of the first motor to control release of the moisturizer from the dispensing container (136).
11. The dispensation unit as claimed in claim 7, further comprising a plurality of dispensing containers, wherein an outlet port of each of the dispensing containers (136) is coupled to a respective inlet port of a connecting pipe (1014), wherein the connecting pipe includes at least one moisturizer releasing port coupled to a respective inlet port of the at least one guiding channel (1016).
12. The dispensation unit as claimed in claim 7, further comprising a housing adapted to be disposed on at least one item adapted to be worn by a user in a manner such that the outlet of the at least one guiding channel (1016) faces skin of the user.
13. The dispensation unit as claimed in claim 7, wherein the controller unit of the dispensation unit (104) is a central controller unit configured to communicatively couple to a plurality of controller units of a plurality of dispensation units respectively.
14. The dispensation unit as claimed in claim 13, wherein the central controller unit is configured to select the dispensing container (136) from the dispensing containers of the plurality of dispensation units to release the moisturizer to the one or more portions of the body.
15. The dispensation unit as claimed in claim 7, further comprising: a second opener (1012) coupled to the dispensing container, wherein an empty space between the first opener (1010) and the second opener (1012) acts as a reservoir of the moisturizer and a filled state of the empty space facilitates release of the moisturizer with a relatively higher pressure.
16. A system for dispensing moisturizer towards one or more portions of a body, the system comprising:

    a smart wearable device (102) comprising:

    a first controller (112) configured to determine nature, present condition of user's skin and quality of the user's skin through sensor data, wherein the sensor data is received from a plurality of sensor including a temperature sensor, conductance sensor, moisture sensor and ultraviolet radiation sensor;

a scheduler (118) configured to determine a release time for the moisturizer, a predetermined quantity of the moisturizer, and said one or more portions of the body to release the moisturizer thereof; and

the first controller unit (112) configured to communicate an instruction to release the moisturizer based on determination of the scheduler (118); and

a dispensation unit (104) comprises:

a second controller unit (132) configured to receive the instruction from the first controller unit (112) to release the predetermined amount of the moisturizer to said one or more portions of the body;

a dispensing container (136) comprises at least one outlet port to release the predetermined amount of the moisturizer thereof;

a first opener (1010) coupled to the at least one outlet port of the dispensing container (136), wherein the second controller unit is configured to actuate the first opener (1010) to release the moisturizer from the dispensing container (136); and

at least one actuating mechanism, upon activation, configured to apply force on an external surface of the dispensing container (136) to release the predetermined amount of the moisturizer from the first opener (1010) to the one or more portions of the body through at least one guiding channel (1016); wherein the at least one guiding channel has an inlet coupled to the at least one outlet port (1108) of the dispensing container (136) and an outlet disposed near the one or more portions of the body; wherein the second controller unit is configured to activate the at least one actuating mechanism to release the moisturizer to one or more portions of the body, wherein the at least one actuating mechanism comprises a first motor coupled to a first spindle (1120a) and a second spindle (1120b), through at least three interlocked gears, wherein the controller unit of the dispensation unit (104) is configured to:

actuate the first motor to cause a rotational movement of the first spindle (1120a) and the second spindle (1120b) over the external surface of the dispensing container (136), wherein rotation of first gear (1152) in an anti-clock wise direction causes rotational movement of a second gear (1154) and third gear (1156) in a clock-wise direction, wherein the first spindle (1120a) and the second spindle (1120b) mechanically attached to the second gear (1154) and the third gear (1156) respectively, rotate in the clockwise direction which causes a force on the dispensing container (136); and

release the moisturizer from the dispensing container (136) in accordance with the rotational movement of the first spindle (1120a) and the second spindle (1120b).

17. The system as claimed in claim 16, wherein the smart wearable device (102) comprises a sensor module (120) to monitor physical and physiological parameters of a user and environmental parameters of a location of the user.
18. The system as claimed in claim 17, further includes an application server (108) configured to process, store and retrieve user profile related information and environmental related information to determine requirement of releasing the moisturizer to the one or more portions the body.