container to enable wireless pressure or other medicament relevant parameter value monitoring. The liquid medicament container is coupled with a first housing part of the medical device, which first housing part may for instance constitute a pre-filled disposable injection device. The RFID unit communicates wirelessly with a control circuit that is contained in a second housing part of the medical device that is releasably attached to the first housing part. The control circuit is adapted to process the values measured by the RFID unit, to compare it with pre-defined values and to provide an alert to the user if the measured values fall outside normal operating conditions, and to communicate data relating to the measured values to an external device for further data processing.

The control circuit of the medical device described in WO 2009/024562 can thus be used with a series of pre-filled disposable injection devices, but the requirement that the RFID unit with the value sensor is contained in the medicament container of the pre-filled disposable injection devices significantly increases the costs of the pre-filled disposable injection device.

Summary of Some Embodiments of the Invention

~~It is thus inter alia an object of~~Some embodiments of the present invention ~~to~~ may provide an apparatus, a method and a computer program for determining information related to a condition and/or use of a medical device while dispensing with costly measurement components within the medical device.

According to a first aspect of the present invention, an apparatus is disclosed, comprising

a mating unit for releasably attaching the apparatus to a medical device for ejecting a medicament or for releasably receiving at least a part of said medical device, wherein said medical device is one of an injection device and an infusion device, and

one or more optical sensors for determining information related to a condition and/or use of said medical device, said determining comprising recognizing characters.~~comprising a mating unit for releasably attaching the apparatus to a medical device or for releasably receiving at least a part of the medical device, and one or~~

~~more optical sensors and/or one or more acoustical sensors for determining information related to a condition and/or use of the medical device.~~

According to a second aspect of the present invention, a system is disclosed, comprising a medical device and an apparatus according to the first aspect of the present invention.

According to a third aspect of the present invention, a method is disclosed, comprising determining, based on information captured by one or more optical sensors , information related to a condition and/or use of a medical device for ejecting a medicament, wherein said medical device is one of an injection device and an infusion device, said determining comprising recognizing characters, wherein said sensors are comprised in an apparatus that further comprises a mating unit for releasably attaching the apparatus to said medical device or for releasably receiving at least a part of said medical device.~~determining, based on information captured by one or more optical sensors and/or one or more acoustical sensors, information related to a condition and/or use of a medical device, wherein the sensors are comprised in an apparatus that further comprises a mating unit for releasably attaching the apparatus to the medical device or for releasably receiving at least a part of the medical device.~~

Accordingly, also an apparatus configured to perform the method according to the third aspect of the present invention shall be considered to be disclosed.

According to a fourth aspect of the present invention, furthermore a computer program is disclosed, comprising instructions operable to cause a processor to perform the method the third aspect of the present invention when said computer program is executed on said processor.~~comprising program code for performing the method according to the third aspect of the present invention when the computer program is executed on a processor.~~ The computer program may for instance be storable or encodable in a computer-readable medium. The computer program may for instance at least partially represent software and/or firmware of the processor.

According to a fifth aspect of the present invention, furthermore a computer-readable medium is disclosed, having a computer program according to the fourth aspect of the present invention stored thereon. The computer-readable medium may for instance be embodied as an electric, magnetic, electro-magnetic, optic or other storage medium, and may either be a removable medium or a medium that is fixedly installed in an apparatus or device. Non-limiting examples of such a computer-readable medium are a Random-Access Memory (RAM) or a Read-Only Memory (ROM). The computer-

readable medium may for instance be a tangible medium, for instance a tangible storage medium. A computer-readable medium is understood to be readable by a computer, such as for instance a processor.

In the following, features and embodiments (exhibiting further features) of the present invention will be described, which are understood to equally apply to the apparatus, system, method, computer program and computer-readable medium of the present

~~Amended~~ Claims

1. An apparatus ~~(2, 3)~~, comprising
a mating unit ~~(20-1, 20-2; 31)~~ for releasably attaching the apparatus ~~(2)~~ to a medical device for ejecting a medicament ~~(1)~~ or for releasably receiving at least a part of said medical device ~~(1)~~, wherein said medical device is one of an injection device and an infusion device, and
one or more optical sensors ~~(25, 26)~~ for determining information related to a condition and/or use of said medical device ~~(1)~~, said determining comprising recognizing characters.

2. The apparatus ~~(2, 3)~~ according to claim 1, wherein said information related to a condition and/or use of said medical device ~~(1)~~ comprises at least information on a selected dose of the medicament that is to be ejected by said medical device.

3. The apparatus ~~(2, 3)~~ according to ~~any of the~~ claim~~s~~ 1 or -2, wherein said medical device is one of an injection pen and an infusion pump.

4. The apparatus ~~(2, 3)~~ according to any one of ~~the~~ claims 1-3, wherein said one or more optical sensors ~~(25, 26)~~ comprise at least one optical sensor ~~(25)~~ configured to capture an image of an information-bearing or information-displaying ~~(13)~~ part of said medical device ~~(1)~~, and wherein said apparatus ~~(2, 3)~~ is configured to recognize characters from said captured image.

5. The apparatus according to claim 4, wherein said apparatus is further configured to capture at least two images of said information-bearing or information-displaying ~~(13)~~ part of said medical device ~~(1)~~ and to only recognize characters from at least one of said at least two captured images if no change between said at least two captured images is detected.

6. The apparatus according to claim 4, wherein said apparatus is further configured to capture at least two images of said information-bearing or information-displaying ~~(13)~~ part of said medical device ~~(1)~~ and to only recognize characters from at least one of said at least two captured images if no change between at least two of said at least two captured images is detected within a specified period of time.

7. The apparatus ~~(2, 3)~~ according to any one of ~~the~~ claims 1-6, wherein said determining further comprises at least partially monitoring a timing of an application sequence of said medical device.

8. The apparatus ~~(2, 3)~~ according to claim 7, wherein said apparatus is configured to only determine and/or further process said information if said monitored timing at least partially corresponds to a specified timing of an application sequence of said medical device.

9. The apparatus ~~(2, 3)~~ according to any one of ~~the~~ claims 1-8, wherein said one or more optical sensors ~~(25, 26)~~ comprise at least one optical sensor ~~(26)~~ configured to capture information representative of a colour of at least a part ~~(10)~~ of said medical device ~~(1)~~ or to determine a colour of at least a part of said medical device ~~(1)~~.

10. The apparatus ~~(2, 3)~~ according to claim 9, wherein said apparatus ~~(2, 3)~~ is configured to recognize a colour of said part ~~(10)~~ of said medical device ~~(1)~~ from said captured information.

11. The apparatus ~~(2, 3)~~ according to any one of ~~the~~ claims 1-10, said apparatus further comprising one or more acoustical sensors ~~(27)~~, wherein said one or more acoustical sensors ~~(27)~~ comprise at least one acoustical sensor ~~(27)~~ configured to capture a sound produced when said medical device ~~(1)~~ is used.

12. The apparatus ~~(2, 3)~~ according to claim 11, wherein said apparatus ~~(2, 3)~~ is configured to only capture an image of said information-bearing or information-displaying ~~(13)~~ part of said medical device ~~(1)~~ and/or to perform said recognizing characters if said captured sound corresponds to a sound produced when a dose for a medicament to be ejected by said medical device ~~(1)~~ is dialled.

13. The apparatus ~~(2, 3)~~ according to any one of ~~the~~ claims 1-12, further comprising a display unit ~~(21)~~ for displaying information representative of at least a part of said determined information.

14. The apparatus ~~(2, 3)~~ according to any one of ~~the~~ claims 1-13, further comprising an interface ~~(28)~~ configured to provide said determined information to another device ~~42, 42')~~ via a wired or wireless connection.

15. The apparatus ~~(2, 3)~~ according to any one of ~~the~~ claims 1-14, further comprising an interface ~~(28)~~ configured to receive information indicative of a type and/or dose of medicament to be ejected.

16. The apparatus according to any one of ~~the~~ claims 1-15, further comprising a processor ~~(24)~~ for determining a proposal of a type and/or dose of a medicament to be ejected by said medical device.

17. The apparatus according to any one of ~~the~~ claims 1-16, further comprising a measurement unit ~~(29)~~ for measuring at least one parameter that is representative of a condition of a creature that is to receive a medicament ejectable by said medical device.

18. The apparatus according to any one of ~~the~~ claims 1-17, wherein a user of said medical device is required to confirm said determined information.

19. The apparatus according to any one of ~~the~~ claims 1-18, wherein said apparatus is configured to determine said information at least partially from recognized characters.

20. A system, comprising a medical device ~~(1)~~ and an apparatus ~~(2, 3)~~ according to any one of ~~the~~ claims 1-19.

21. A method ~~(500, 600, 700)~~, comprising

- determining, based on information captured by one or more optical sensors ~~(25, 26)~~, information related to a condition and/or use of a medical device for ejecting a medicament ~~(1)~~, wherein said medical device is one of an injection device and an infusion device, said determining comprising recognizing characters, wherein said sensors ~~(25, 26, 27)~~ are comprised in an apparatus ~~(2, 3)~~ that further comprises a mating unit ~~(20-1, 20-2; 31)~~ for releasably attaching the apparatus ~~(2)~~ to said medical device ~~(1)~~ or for releasably receiving at least a part of said medical device ~~(1)~~.

22. A computer program ~~(61)~~, comprising instructions operable to cause a processor ~~(24)~~ to perform the method ~~(500, 600, 700)~~ of claim 21 when said computer program ~~(61)~~ is executed on said processor ~~(24)~~.