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(54) **MONITORING SANITARY MIRROR DEVICE**

ÜBERWACHUNG EINER SANITÄRSPIEGELVORRICHTUNG

MIROIR SANITAIRE AVEC DISPOSITIF DE SURVEILLANCE

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EP 4 098 154 B1

Description

Technical Field

[0001] The present invention relates to sanitary mirror devices capable of monitoring body characteristics.

Technical Background

[0002] In bathrooms and other sanitary facilities, mirrors are common which help individuals to check their outer appearance before leaving the bathroom or the sanitary facility. As such mirrors are often installed above a faucet, it belongs to a morning routine of most people to stand in front of the mirror brushing their teeth, washing their face, applying cosmetics, styling hair, and the like.

[0003] Often, it also belongs to a morning routine to use a body scale to measure the body weight, using other separate devices measuring the heart rate and/or blood pressure and/or to make measurements of other body characteristics such as respiratory rate or body temperature.

[0004] Particularly for sportive individuals, body characteristics, such as blood pressure and heart rate, are of permanent continuous interest and are usually measured in the mornings shortly after getting up from the night rest.

[0005] So the morning routine usually takes a significant part of the day. Particularly, the additional actions of measuring body characteristics prolong the morning routine. As time is often critical in the mornings these additional actions require getting up earlier.

[0006] Document WO 2018/060232 A1 discloses an apparatus for supporting at least one user in performing a personal care activity, such as a smart mirror, the apparatus comprising a control unit configured to determine a personal care activity performed by the at least one user; identify one or more regions of interest in the image of the at least one user based on the determined personal care activity; acquire information associated with the determined personal care activity, and modify the image of the at least one user at the identified one or more regions of interest based on the acquired information to support the at least one user in performing the personal care activity. This document discloses a sanitary mirror device according to the preamble of claim 1.

[0007] Document WO 2018/045649 A1 discloses a smart mirror including a mirror surface, a display module, a voice module, a communication module, a control processing module and a power supply module. The mirror surface includes a light reflection layer and a transparent material layer. The display module is arranged in the transparent material layer. The voice module, the communication module, the control processing module and the power module are arranged on at least one end of the mirror or the back of the mirror. The communication module is used to establish a communication connection with an external device. The control processing module is configured to receive and process instructions to control the display module, the voice module and the communication module.

[0008] Document CN 111 977 985 A discloses a smart mirror including a display device and a mirror surface with a translucent coating. The mirror surface is located on the surface of the display device. A part of the mirror surface is transparent, and the other part has a translucent coating.

[0009] Document CN 108 920 509 A discloses an intelligent vanity mirror, comprising a vanity mirror body, a wireless communication module, a controller module, a detection module, a voice module, an input display module, a power supply module and a storage module. The wireless communication module, detection module, voice module, input display module, power supply module and storage module are all electrically connected with the controller module. The wireless communication module, the controller module, the power supply module and the storage module are all arranged in the vanity mirror body. The detection module is arranged outside the vanity mirror body, and is used for analyzing skin color and detecting human makeup. The input and display module is arranged outside the vanity mirror body and is used for inputting and displaying personal information.

[0010] Document US 2008/126129 A1 discloses a method for determining the conditions of a skin of an individual and providing recommendations on the factors to be used on at least one skin aesthetic procedure, the method comprising obtaining information from the individual regarding the skin aesthetic procedure the individual desires to have performed, determining at least one skin condition of the individual prior to the administration of the skin aesthetic procedure, selecting the most efficacious factors for the desired skin aesthetic procedure based on the skin condition, and providing recommendations to the individual for the skin care treatments procedure based on the selected factors to enhance efficiency of the skin aesthetic procedure.

[0011] It is an object of the present invention to improve the morning routine by automatizing the single actions of measuring and monitoring the current body characteristics.

Summary of the Invention

[0012] This object is achieved by the sanitary mirror device for monitoring body characteristics according to claim 1.

[0013] Further embodiments are indicated in the depending sub-claims.

[0014] According to a first aspect a sanitary mirror device is provided, comprising:

- a mirror element having a reflective mirror plane;
- a sensor unit including one or more sensors which are configured to detect body characteristics data in a contactless manner, the body characteristics data corresponding to or related to at least one body char-

acteristics of an individual in front of the mirror device;
- a display unit;
- a control unit configured to receive the body characteristics data and to instruct the display unit to display information corresponding to and/or relating to the body characteristics data,
- wherein the sensor unit comprises a radar sensor unit configured to perform a Doppler radar measurement to detect the body characteristics data.

[0015] Furthermore, the radar sensor unit has a radar sensor and an analyzing unit to process radar signals, wherein the radar unit is configured to provide radar signals and comprise at least one antenna, wherein the antenna is provided as one of a part of a frame circumventing the mirror plane, an area of a metal layer forming the mirror plane which is galvanically isolated or any other configuration where the radar radiation is not blocked or distorted by a metal layer of or in the mirror element.

[0016] In contrast to the common passive sanitary mirrors, the sanitary mirror device according to the present invention further includes a sensor unit configured to obtain a body characteristic of an individual which is presently located (standing, sitting) in front of the mirror element. By means of the display unit whose display area is embedded or abuts to the mirror plane of the mirror element, the measured body characteristics or related information can be displayed and presented to the individual.

[0017] This allows the individual using the sanitary mirror device to do the morning routine as usual while at the same time being informed about the personal body characteristics which have been measured and obtained during the time period the individual has been present in front of the mirror device. This allows to save precious morning time as the additional actions to do measurements and to get informed about body characteristics can be reduced.

[0018] The display unit may be integrated with the mirror element so that a display area of the display unit is embedded or directly abuts to the mirror plane.

[0019] Particularly, the display area may be formed as a semi-transparent layer embedded in or neighboring the mirror plane, so that when the display unit is deactivated the display area is fully reflective, particularly as reflective as the mirror plane itself.

[0020] The sanitary mirror device includes a sensor unit that allows contactless measuring of body characteristics using electromagnetic radiation such as radar, visible light, or infrared light based measurements.

[0021] Specifically, the body characteristics comprise a heart rate, a respiratory rate, and/or blood pressure.

[0022] So, the sensor unit includes a radar sensor unit that has a radar sensor and an analyzing unit to apply measurements on the individual being in front of the sanitary mirror device. The radar sensor unit is configured to detect micromotion in the body of the individual, the resulting radar signals can be analyzed in the analyzing unit, particularly using machine learning methods, to obtain a heart rate and/or a respiratory rate and/or a blood pressure information.

[0023] Detecting heart rate and respiratory rate using Doppler radar measurements is well known in the art, e.g. from documents R. Fletcher et al., "Low-Cost Differential Front-End for Doppler Radar Vital Sign monitoring," IEEE MTT-S International Microwave Symposium Digest, pp.1325-1328, 2009 and Young Woo Choi et al, "Micro-Doppler simulator of bulk and micro motions for vehicle drivers", IEEE, 2016 International Conference on Information and Communication Technology Convergence (ICTC) 19-21 Oct. 2016.

[0024] Furthermore, blood pressure can also be measured using Doppler radar technology as known from document Tomoyuki Ohata et al.,. "Non-Contact Blood Pressure Measurement Scheme Using Doppler Radar", Annu Int Conf IEEE Eng Med Biol Soc, 2019 Jul.

[0025] The Doppler radar micro motion measurement can be applied in a single antenna and dual antenna technology and is sensitive to the motion of body parts such as lungs and heart to detect respiratory and heart beat motions. From these motions respiratory rate, blood pressure, and heart rate can be derived using appropriate well-known signal processing technology.

[0026] Moreover, the sensor unit may comprise a camera configured to detect a skin color of the individual in front of the mirror device as a body characteristics.

[0027] It may be provided that the sensor unit comprises an infrared camera or an infrared temperature sensor which is configured to detect a body temperature as a body characteristics.

[0028] According to an embodiment, the control unit may be configured to generate or to retrieve information from an internal storage unit and/or a remote storage unit associated with the obtained body characteristics data and to display the retrieved information on the display area of the display unit.

[0029] Furthermore, the control unit may be configured to track the body characteristics data over time associated with an identification of the individual the body characteristics data belong to, wherein the identification is manually input or automatically made by means of a camera image of the individual taken at the time of detecting body characteristics data and by applying well-known face recognition techniques.

Brief description of the drawings

[0030] Embodiments are described in more detail in conjunction with the accompanying drawings in which:

Figure 1 is a block diagram illustrating the components of the sanitary mirror device according to the present invention.

Description of Embodiments

[0031] Figure 1 schematically shows the sanitary mirror device 1 according to the present invention. The sanitary mirror device 1 includes a mirror element 2 with a mirror plane for providing a mirror image of objects and individuals being present in front of the mirror element 2. The mirror element 2 is usually attached to a wall (e.g. in parallel to the wall), particularly in a bathroom or in a sanitary facility.

[0032] The mirror device 1 is provided with a display unit 3 having a display area.

[0033] The display unit 3 may be formed as an LCD-display with backlight or as a Micro LED display. Display unit 3 can be provided neighboring the mirror element 2, such as below the mirror plane of the mirror element 2. Preferably, the display area of display unit 3 is arranged behind a semi-transparent reflective layer. The semi-transparent layer is at least provided at the portion of the mirror plane. When display unit 3 is deactivated the display area is black and does not emit any light. Due to the semi-transparent layer, the mirror plane is continuously reflective even in the portion of the mirror plane behind which the display area is located. Therefore, the display area acts like the rest of the mirror plane. Furthermore, when display unit 3 is activated it allows displaying information to a user in front of the mirror element 2.

[0034] Preferably, the mirror element 2 is formed by a glass screen which is coated with a metal layer on its backside wherein in the portion of the mirror plane where the display unit is arranged the metal layer is thinned to make the metal layer semi-transparent so that an image presented by the display unit 3 shines through the semi-transparent metal layer. This allows the metal semi-transparent layer to act as a mirror when the display unit 3 is deactivated and to perceive the display image through the mirror plane when the display unit 3 is activated.

[0035] Furthermore, the sanitary mirror device 1 includes a sensor unit 4 with one or more sensors to obtain sensor information. The sensor unit 4 is configured to obtain body characteristics of an individual being present in front of the mirror element 2 and to display the body characteristics or information related thereto to immediately inform the individual while the individual is using the mirror device e.g. to check their outer appearance.

[0036] The sensor unit 4 comprises a radar sensor unit 41. The radar sensor unit 41 has a radar unit 41a and an analyzing unit 41b which are configured to performs a Doppler radar measurement to obtain a micro-motion radar signal of the individual's body. The micro-motion radar signal can be analyzed in the analyzing unit 41b to obtain a heart rate and/or a blood pressure and/or a respiratory rate and the like. Methods for determining the above body characteristics using Doppler radar measurements are well known in the art as indicated in the introduction and are not further explained herein.

[0037] Basically, the radar unit 41a can be of a single antenna or dual antenna type. A dual antenna type radar unit 41 has a transmitting antenna 41c and a receiving antenna 41d which allows the radar unit to obtain a Doppler radar signal which can be analyzed in the analyzing unit 41b. As the radar antennas 41c, 41d are less efficient behind the metal layer of the mirror element 2, the transmitting and receiving antenna 41c, 41d may be arranged at an edge of the mirror element 2, particularly in or on a frame part 6 at least partly surrounding the mirror element 2.

[0038] Alternatively, mirror element 2 may be provided with openings 41f in the metal layer in which at least one of the transmitting and receiving antennas may be arranged.

[0039] The transmitting and receiving antennas in the opening 41f may be formed as an antenna layer made of an optically reflective and electrically conductive metal which is galvanically isolated from the rest of the metal layer of the mirror element 2. This allows forming antenna elements for the radar sensor unit 41 which may be separated from the rest of the metal layer by a gap 41g that is preferably smaller than 5 mm.

[0040] The radar sensor unit 41 can be further provided with and be connected with a multiple antenna arrangement where one or more additional antennas 41j are placed at multiple locations (such as left and right of the mirror device 1) to acquire a more detailed signal for the radar sensor unit 41 to process.

[0041] The sensor unit 4 may further be provided with an infrared camera 42 or an infrared temperature sensor which is directed to a position in front of the mirror element 2 which allows obtaining a body temperature as a body characteristics of an individual.

[0042] The sensor unit 4 may further be provided with a room temperature sensor 43 to detect an ambient temperature.

[0043] A control unit 5 is provided which is in communication with the sensor unit 4 and with the display unit 3. The control unit 5 may include a data processing unit and be in control of the displaying of the measured body characteristics on the display area of display unit 3 and further additional information such as an ambient temperature.

[0044] Further additional information can be provided and displayed on the display unit 3, such as warnings, e.g. if a critical condition is detected. For instance, it can be checked if a critical condition has occurred if any of the heart rate, blood pressure and respiratory rate is too high or too low. In case of a critical condition a warning signal can be displayed and/or advice can be given to the individual.

[0045] Furthermore, the control unit 5 may be in connection with a storage unit 7 to collect and timely track the measured body characteristics each time a measurement has been carried out to obtain a timeline of the body characteristics e.g. for medical analysis and/or supervision. The storage unit 7 may be integrated with the mirror device 1 or can be cloud-based when the control unit 5 is equipped with an optional data communication

unit 51 to transmit body characteristics over a network, such as the Internet, to the cloud-based storage unit.

[0046] The control unit 5 may have communication means to e.g. communicate with a Home IoT unit. If the user configures his or her Home IoT system to be connected to the smart mirror device 1, he or she will be able to get the information from the control unit 5 to this Home IoT network. A mobile device can be used to retrieve the data and see the graphs of blood pressure, temperature reading etc. over a predetermined time frame such as a week, a month etc. This functionality is configurable so that user can enable or disable the communication of data from control unit 5 to external devices. This data can also be directly retrieved from the control unit 5 by the mobile device.

[0047] The timeline of the body characteristics can be stored associated to a user which can be identified by manual input. Therefore, an input device (not shown) can be separately provided or can be implemented as a touch sensor surface on the display area of the display unit 3. The touch sensor may be configured in conjunction with the control unit 5 to make selections from menus or choices displayed on the display area so that an identification of the individual presently using the mirror device can be manually input by the user.

[0048] The sensor unit 4 may further be provided with and or coupled to a camera 44 which is directed to a position in front of the sanitary mirror device 1 in which the individual using the mirror device is usually positioned. An image taken by the camera 44 may be used to automatically identify the individual in front of the mirror device 1 applying well known face recognition techniques in the control unit 5 or the cloud. So, the body characteristics can be stored in conjunction with the identification of the specific individual the currently obtained body characteristics belong to. Thereby, different data sets of timelines of body characteristics can be kept in association with a specific individual if the mirror device is used by a plurality of individuals.

[0049] Furthermore, the camera 44 can be used as an additional sensor for detecting the skin color of the individual, particularly at a predetermined body position, so that the skin color can be tracked over time as a body characteristics. The control unit 5 making use of specific databases stored in the storage unit or a cloud storage can make use of an expert system for patterns which may indicate illness symptoms of the individual by analyzing the timelines of the body characteristics stored.

Claims

1. A sanitary mirror device (1), comprising:

- a mirror element (2) having a reflective mirror plane;
- a sensor unit (4) including one or more sensors (41, 42, 43, 44) which are configured to detect body characteristics data in a contactless manner, the body characteristics data corresponding to or related to at least one body characteristics of an individual in front of the mirror device (1);
- a display unit (3);
- a control unit (5) configured to receive the body characteristics data and to instruct the display unit (3) to display information corresponding to and/or relating to the body characteristics data,

characterised in that

the sensor unit (3) comprises a radar sensor unit (41) configured to perform a Doppler radar measurement to detect the body characteristics data, and **in that**
the radar sensor unit (41) has a radar unit (41a) and an analyzing unit (41b) to process radar signals, wherein the radar unit (41a) is configured to provide radar signals and comprises at least one antenna (41c, 41d), wherein the at least one antenna (41c, 41d) is provided as one of a part of a frame circumventing the mirror plane, or an area of a metal layer forming the mirror plane which is galvanically isolated from the rest of the mirror plane.

2. The sanitary mirror device (1) according to claim 1, wherein the display unit (3) is integrated with the mirror element (2) so that a display area of the display unit (3) is embedded or directly abuts to the mirror plane.

3. The sanitary mirror device (1) according to claim 2, wherein the display area is formed as a semi-transparent layer in or neighboring the mirror plane, so that when the display unit (3) is deactivated the display area is reflective, particularly as reflective as the mirror plane.

4. The sanitary mirror device (1) according to claim 1, wherein the body characteristics comprise a heart rate, a respiratory rate, and/or blood pressure.

5. The sanitary mirror device (1) according to claim 1, wherein an additional antenna (41j) is provided external to the arrangement of the mirror element (2), the control unit (5) and the display unit (3).

6. The sanitary mirror device (1) according to any of the claims 1 to 5, wherein the sensor unit (4) comprises a camera (44) configured to detect a skin color of the individual in front of the mirror device as a body characteristics.

7. The sanitary mirror device (1) according to any of the claims 1 to 6, wherein the sensor unit (4) comprises an infrared camera (42) or an infrared tem-

perature sensor (43) which is configured to detect a body temperature as a body characteristics.

8. The sanitary mirror device (1) according to any of the claims 1 to 7, wherein the control unit (5) is configured to generate or to retrieve information from an internal storage unit and/or a remote storage unit associated with the obtained body characteristics data and to display the retrieved information on the display area of the display unit (3).

9. The sanitary mirror device (1) according to any of the claims 1 to 8, wherein the control unit (5) is configured to track the body characteristics data over time associated with an identification of the individual the body characteristics data belong to, wherein the identification is manually input or automatically made by means of a camera image of the individual taken at the time of detecting body characteristics data and by applying face recognition techniques.

Patentansprüche

1. Sanitärspiegelvorrichtung (1), umfassend:

- ein Spiegelelement (2) mit einer reflektierenden Spiegelebene;
- eine Sensoreinheit (4), die einen oder mehrere Sensoren (41, 42, 43, 44) umfasst, die so konfiguriert sind, dass sie berührungslos Daten über Körpereigenschaften erfassen, wobei die Daten über Körpereigenschaften mindestens einer Körpereigenschaft einer Person vor der Spiegelvorrichtung (1) entsprechen oder sich darauf beziehen;
- eine Anzeigeeinheit (3);
- eine Steuereinheit (5), die ausgebildet ist, um die Daten über Körpereigenschaften zu empfangen und die Anzeigeeinheit (3) anzuweisen, Informationen anzuzeigen, die den Daten über Körpereigenschaften entsprechen und/oder sich auf diese beziehen,

dadurch gekennzeichnet,

dass die Sensoreinheit (3) eine Radarsensoreinheit (41) umfasst, die so konfiguriert ist, dass sie eine Dopplerradarmessung durchführt, um die Körpereigenschaftsdaten zu erfassen, und **dass** die Radarsensoreinheit (41) eine Radareinheit (41a) und eine Analyseeinheit (41b) zum Verarbeiten von Radarsignalen aufweist, wobei die Radareinheit (41a) so konfiguriert ist, dass sie Radarsignale bereitstellt und mindestens eine Antenne (41c, 41d) umfasst, wobei die mindestens eine Antenne (41c, 41d) als ein Teil eines Rahmens, der die Spiegelebene umgibt, oder als ein Bereich einer Metallschicht, die die Spiegelebene bildet und galvanisch vom Rest der Spiegelebene isoliert ist, bereitgestellt wird.

2. Sanitärspiegelvorrichtung (1) nach Anspruch 1, wobei die Anzeigeeinheit (3) in das Spiegelelement (2) integriert ist, so dass ein Anzeigebereich der Anzeigeeinheit (3) in die Spiegelebene eingebettet ist oder direkt an diese angrenzt.

3. Sanitärspiegelvorrichtung (1) nach Anspruch 2, wobei der Anzeigebereich als halbtransparente Schicht in oder angrenzend an die Spiegelebene ausgebildet ist, so dass bei deaktivierter Anzeigeeinheit (3) der Anzeigebereich reflektierend ist, insbesondere so reflektierend wie die Spiegelebene.

4. Sanitärspiegelvorrichtung (1) nach Anspruch 1, wobei die Körpermerkmale eine Herzfrequenz, eine Atemfrequenz und/oder einen Blutdruck umfassen.

5. Sanitärspiegelvorrichtung (1) nach Anspruch 1, wobei eine zusätzliche Antenne (41j) außerhalb der Anordnung aus Spiegelelement (2), Steuereinheit (5) und Anzeigeeinheit (3) vorgesehen ist.

6. Sanitärspiegeleinrichtung (1) nach einem der Ansprüche 1 bis 5, wobei die Sensoreinheit (4) eine Kamera (44) umfasst, die ausgebildet ist, eine Hautfarbe der Person vor der Spiegeleinrichtung als Körpermerkmal zu erfassen.

7. Sanitärspiegelvorrichtung (1) nach einem der Ansprüche 1 bis 6, wobei die Sensoreinheit (4) eine Infrarotkamera (42) oder einen Infrarot-Temperatursensor (43) umfasst, der so konfiguriert ist, dass er eine Körpertemperatur als ein Körpermerkmal erfasst.

8. Sanitärspiegelvorrichtung (1) nach einem der Ansprüche 1 bis 7, wobei die Steuereinheit (5) ausgebildet ist, um Informationen aus einer internen Speichereinheit und/oder einer entfernten Speichereinheit, die mit den erhaltenen Körpermerkmalsdaten verbunden sind, zu erzeugen oder abzurufen und die abgerufenen Informationen auf der Anzeigefläche der Anzeigeeinheit (3) anzuzeigen.

9. Sanitärspiegelvorrichtung (1) nach einem der Ansprüche 1 bis 8, wobei die Steuereinheit (5) so konfiguriert ist, dass sie die Körpermerkmalsdaten über einen Zeitraum verfolgt, der mit einer Identifizierung der Person verbunden ist, zu der die Körpermerkmalsdaten gehören, wobei die Identifizierung manuell eingegeben oder automatisch mittels eines Kamerabildes der Person, das zum Zeitpunkt der Erfassung der Körpermerkmalsdaten aufgenommen wurde, und durch Anwendung von Gesichtserken-

nungstechniken vorgenommen wird.

Revendications

1. Un dispositif de miroir sanitaire (1), comprenant :

- un élément de miroir (2) avec un plan de miroir réfléchissant ;
- une unité de capteurs (4) comprenant un ou plusieurs capteurs (41, 42, 43, 44) configurés pour détecter des données de caractéristiques corporelles sans contact, les données de caractéristiques corporelles correspondant ou se rapportant à au moins une caractéristique corporelle d'un individu se trouvant devant le dispositif de miroir (1) ;
- une unité d'affichage (3) ;
- une unité de commande (5) configurée pour recevoir les données de caractéristiques corporelles et pour ordonner à l'unité d'affichage (3) d'afficher des informations correspondant et/ou se rapportant aux données de caractéristiques corporelles,

caractérisé en ce que

l'unité de détection (3) comprenant une unité de détection radar (41) configurée pour effectuer une mesure radar Doppler afin de détecter les données de caractéristiques corporelles, et que l'unité de capteur radar (41) comporte une unité radar (41a) et une unité d'analyse (41b) pour traiter les signaux radar, l'unité radar (41a) étant configurée pour fournir des signaux radar et comprenant au moins une antenne (41c, 41d), l'au moins une antenne (41c, 41d) étant fournie sous la forme d'une partie d'un cadre contournant le plan du miroir ou d'une zone d'une couche métallique formant le plan du miroir qui est isolée de manière galvanique du reste du plan du miroir.

2. Le dispositif de miroir sanitaire (1) selon la revendication 1, dans lequel l'unité d'affichage (3) est intégrée à l'élément de miroir (2) de sorte qu'une zone d'affichage de l'unité d'affichage (3) est encastrée ou directement adossée au plan du miroir.

3. Le dispositif de miroir sanitaire (1) selon la revendication 2, dans lequel la zone d'affichage est formée comme une couche semi-transparente dans ou à proximité du plan du miroir, de sorte que lorsque l'unité d'affichage (3) est désactivée, la zone d'affichage est réfléchissante, en particulier aussi réfléchissante que le plan du miroir.

4. Le dispositif de miroir sanitaire (1) selon la revendication 1, dans lequel les caractéristiques corporelles comprennent la fréquence cardiaque, la fréquence respiratoire et/ou la pression artérielle.

5. Le dispositif de miroir sanitaire (1) selon la revendication 1, dans lequel une antenne supplémentaire (41j) est prévue à l'extérieur de l'agencement de l'élément de miroir (2), de l'unité de commande (5) et de l'unité d'affichage (3).

6. Le dispositif de miroir sanitaire (1) selon l'une des revendications 1 à 5, dans lequel l'unité de capteur (4) comprend une caméra (44) configurée pour détecter la couleur de la peau de l'individu devant le dispositif de miroir en tant que caractéristique corporelle.

7. Le dispositif de miroir sanitaire (1) selon l'une des revendications 1 à 6, dans lequel l'unité de capteur (4) comprend une caméra infrarouge (42) ou un capteur de température infrarouge (43) configuré pour détecter la température du corps en tant que caractéristique du corps.

8. Le dispositif de miroir sanitaire (1) selon l'une des revendications 1 à 7, dans lequel l'unité de commande (5) est configurée pour générer ou récupérer des informations à partir d'une unité de stockage interne et/ou d'une unité de stockage à distance associée aux données de caractéristiques corporelles et pour afficher les informations récupérées sur la zone d'affichage de l'unité d'affichage (3).

9. Le dispositif de miroir sanitaire (1) selon l'une des revendications 1 à 8, dans lequel l'unité de commande (5) est configurée pour suivre les données de caractéristiques corporelles dans le temps associées à une identification de l'individu auquel les données de caractéristiques corporelles appartiennent, l'identification étant saisie manuellement ou réalisée automatiquement au moyen d'une image de l'individu prise par une caméra au moment de la détection des données de caractéristiques corporelles et en appliquant des techniques de reconnaissance faciale.

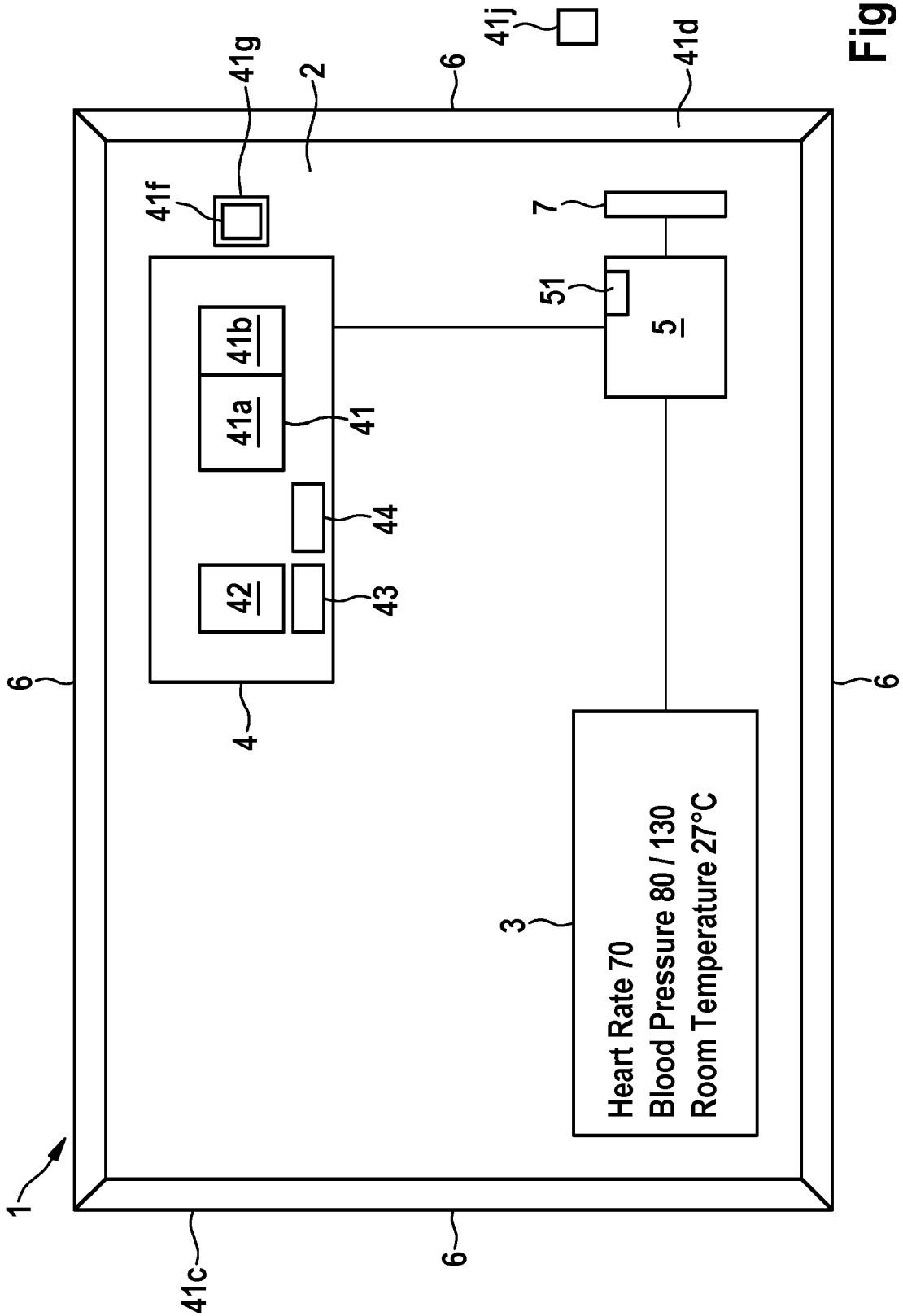
41j
41d
41g
2
6
41f
7
51
5
41b
41a
41
44
42
43
4
6
6
3
Heart Rate 70
Blood Pressure 80 / 130
Room Temperature 27°C
1
41c
6

Fig. 1

REFERENCES CITED IN THE DESCRIPTION

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