

पेटेंट कार्यालय
शासकीय जर्नल

**OFFICIAL JOURNAL
OF
THE PATENT OFFICE**

निर्गमन सं. 06/2020
ISSUE NO. 06/2020

शुक्रवार
FRIDAY

दिनांक: 07/02/2020
DATE: 07/02/2020

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

INTRODUCTION

In view of the recent amendment made in the Patents Act, 1970 by the Patents (Amendment) Act, 2005 effective from 01st January 2005, the Official Journal of The Patent Office is required to be published under the Statute. This Journal is being published on weekly basis on every Friday covering the various proceedings on Patents as required according to the provision of Section 145 of the Patents Act 1970. All the enquiries on this Official Journal and other information as required by the public should be addressed to the Controller General of Patents, Designs & Trade Marks. Suggestions and comments are requested from all quarters so that the content can be enriched.

(Om Prakash Gupta)
CONTROLLER GENERAL OF PATENTS, DESIGNS & TRADE MARKS

7TH FEBRUARY, 2020

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**THE PATENT OFFICE
KOLKATA, 07/02/2020**

Address of the Patent Offices/Jurisdictions

The following are addresses of all the Patent Offices located at different places having their Territorial Jurisdiction on a Zonal basis as shown below:-

<p>1 Office of the Controller General of Patents, Designs & Trade Marks, Boudhik Sampada Bhavan, Near Antop Hill Post Office,S.M.Road,Antop Hill, Mumbai - 400 037</p> <p>Phone: (91)(22) 24123311, Fax : (91)(22) 24123322 E-mail: cgpdtm@nic.in</p>	<p>4 The Patent Office, Government of India, Intellectual Property Rights Building, G.S.T. Road, Guindy, Chennai - 600 032.</p> <p>Phone: (91)(44) 2250 2081-84 Fax : (91)(44) 2250 2066 E-mail: chennai-patent@nic.in</p> <p>❖ The States of Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu and the Union Territories of Puducherry and Lakshadweep.</p>
<p>2 The Patent Office, Government of India, Boudhik Sampada Bhavan, Near Antop Hill Post Office,S.M.Road,Antop Hill, Mumbai - 400 037</p> <p>Phone: (91)(22) 24137701 Fax: (91)(22) 24130387 E-mail: mumbai-patent@nic.in</p> <p>❖ The States of Gujarat, Maharashtra, Madhya Pradesh, Goa and Chhattisgarh and the Union Territories of Daman and Diu & Dadra and Nagar Haveli</p>	<p>5 The Patent Office (Head Office), Government of India, Boudhik Sampada Bhavan, CP-2, Sector -V, Salt Lake City, Kolkata- 700 091</p> <p>Phone: (91)(33) 2367 1943/44/45/46/87 Fax: (91)(33) 2367 1988 E-Mail: kolkata-patent@nic.in</p> <p>❖ Rest of India</p>
<p>3 The Patent Office, Government of India, Boudhik Sampada Bhavan, Plot No. 32., Sector-14, Dwarka, New Delhi - 110075</p> <p>Phone: (91)(11) 25300200 & 28032253 Fax: (91)(11) 28034301 & 28034302 E.mail: delhi-patent@nic.in</p> <p>❖ The States of Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, Uttar Pradesh, Uttaranchal, Delhi and the Union Territory of Chandigarh.</p>	

Website: www.ipindia.nic.in

www.patentoffice.nic.in

All applications, notices, statements or other documents or any fees required by the Patents Act, 1970 and The Patents (Amendment) Act, 2005 or by the Patents (Amendment) Rules, 2006 will be received only at the appropriate offices of the Patent Office.

Fees: The Fees may either be paid in cash or may be sent by Bank Draft or Cheques payable to the Controller of Patents drawn on a scheduled Bank at the place where the appropriate office is situated.

पेटेंट कार्यालय
कोलकाता, दिनांक 07/02/2020

• कार्यालयों के क्षेत्राधिकार के पते

विभिन्न जगहों पर स्थित पेटेंट कार्यालय के पते आंचलिक आधार पर दर्शित उनके प्रादेशिक अधिकार क्षेत्र के साथ नीचे दिए गए हैं:-

<p>1 कार्यालय : महानियंत्रक, एकस्व, अभिकल्प तथा व्यापार चिह्न, एंटोप हिल डाकघर के समीप, एस. एम. रोड, एंटोप हिल, मुम्बई- 400 037, भारत, फोन: (91) (22) 24123311 फ़ैक्स: (91) (22) 24123322 ई. मेल: cgpdmt@nic.in</p>	<p>4 पेटेंट कार्यालय, भारत सरकार इंटेलेक्चुअल प्रॉपर्टी राइट्स बिल्डिंग, इंडस्ट्रियल इस्टेट एसआईडीसीओ आरएमडी गोडाउन एरिया एडजसेन्ट टु ईगल फ्लास्क, जी. एस. टी. रोड, गायन्डी चेन्नई - 600 032. फोन: (91) (44) 2250 2081-84 फ़ैक्स: (91) (44) 2250-2066 ई. मेल: chennai-patent@nic.in ❖ आन्ध्र प्रदेश, तेलंगाना, कर्नाटक, केरल, तमिलनाडु तथा पुडुचेरी राज्य क्षेत्र एवं संघ शासित क्षेत्र, लक्षदीप</p>
<p>2 पेटेंट कार्यालय, भारत सरकार बौद्धिक संपदा भवन, एंटोप हिल डाकघर के समीप, एस. एम. रोड, एंटोप हिल, मुम्बई- 400 037, फोन: (91) (22) 24137701 फ़ैक्स: (91) (22) 24130387 ई. मेल: Mumbai-patent@nic.in ❖ <input type="checkbox"/> गुजरात, महाराष्ट्र, मध्य प्रदेश, गोवा तथा छत्तीसगढ़ राज्य क्षेत्र एवं संघ शासित क्षेत्र, दमन तथा दीव, दावर और नगर हवेली.</p>	<p>5 पेटेंट कार्यालय, भारत सरकार कोलकाता, (प्रधान कार्यालय) बौद्धिक संपदा भवन, सीपी-2, सेक्टर- V, साल्ट लेक सिटी, कोलकाता-700 091, भारत. फोन: (91) (33) 2367 1943/44/45/46/87 फ़ैक्स:/Fax: (91) (33) 2367 1988 ई. मेल: kolkata-patent@nic.in ❖ भारत का अवशेष क्षेत्र</p>
<p>3 पेटेंट कार्यालय, भारत सरकार बौद्धिक संपदा भवन, प्लॉट सं. 32, सेक्टर- 14, द्वारका, नई दिल्ली- 110 075. फोन: (91) (11) 25300200, 28032253 फ़ैक्स: (91) (11) 28034301, 28034302 ई. मेल: delhi-patent@nic.in हरियाणा, हिमाचल प्रदेश, जम्मू तथा कश्मीर, पंजाब, राजस्थान, उत्तर प्रदेश, दिल्ली तथा उत्तरांचल राज्य क्षेत्रों, एवं संघ शासित क्षेत्र चंडीगढ़</p>	

वेबसाइट: <http://www.ipindia.nic.in>
www.patentoffice.nic.in

पेटेंट अधिनियम, 1970 तथा पेटेंट (संशोधन) अधिनियम, 2005 अथवा पेटेंट (संशोधन) नियम, 2006 द्वारा वांछित सभी आवेदन, सूचनाएं, विवरण या अन्य दस्तावेज़ या कोई शुल्क पेटेंट कार्यालय के केवल उपयुक्त कार्यालय में स्वीकृत होंगे। शुल्क: शुल्क या तो नगद रूप में या Controller of Patents के नाम में देय बैंक ड्राफ्ट या चेक के द्वारा भेजी जा सकती है जो उसी स्थान के किसी अनुसूचित बैंक में प्रदत्त हो जहाँ उपयुक्त कार्यालय स्थित है।

SPECIAL NOTICE

18 Months publication as required under Section 11A of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005.

Notice is hereby given that any person at any time before the grant of Patent may give representation by way of opposition to the Controller of Patents at appropriate office on the ground and in a manner specified under section 25(1) of the Patents (Amendment) Act, 2005 read with Rule 55 of the Patents (Amendment) Rules, 2006.

Notice is also given that if any interested person requests for copies of the complete specification, drawing and abstract of any application already published, the photocopy of the same can be supplied by the Patent Office as per the jurisdiction on payment of prescribed fees of Rs.8/- per page. If any further details are required to be obtained, the same can be provided by the respective Patent Offices on request.

(Om Prakash Gupta)
CONTROLLER GENERAL OF PATENTS, DESIGNS & TRADE MARKS

SPECIAL NOTICE

Under the new provision of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005 and Rules there under, Publication of the matter relating to Patents in the Official Gazette of India Part III, Section 2 has been discontinued and instead The Official Journal of the Patent Office is being published containing all the activities of The Patent Office such as publication of all the patent applications after 18th months , grant of patents & all other information in respect of the proceedings as required under the provisions of the Patents (Amendment) Act, 2005 and Rules thereunder on weekly basis on every **Friday**.

The Journal is uploaded in the website every Friday. So Paper form and CD-ROM form of the Journal are discontinued from 01/01/2009.

SPECIAL NOTICE

Every effort is being taken to publish all the patent applications under section 11(A) of the Patents Act. However, if duplication of publication of any application is found, then earlier date of publication will be taken for the purpose of provisional protection for applicant and Patent Office will grant Patent not before six months from the date of second publication, provided that there is there is no third party representation.

(12) PATENT APPLICATION PUBLICATION

(21) Application
No.202041004245 A

(19) INDIA

(22) Date of filing of Application :31/01/2020

(43) Publication Date : 07/02/2020

(54) Title of the invention : AN AUTOMATED IOT BASED BLOOD GLUCOSE MEASUREMENT DEVICE ALONG WITH LED INDICATION

<p>(51) International :A61B0005000000,A61B0005145000,G16H0015000000,A61B0005145500,A61B0005151000 classification (31) Priority Document :NA No (32) Priority :NA Date (33) Name of priority :NA country (86) International Application :NA No :NA Filing Date (87) International : NA Publication No (61) Patent of Addition to Application :NA Number :NA Filing Date (62) Divisional to Application :NA Number :NA Filing Date</p>	<p>(71)Name of Applicant : 1)Dr.SIKHA MADHU BABU Address of Applicant :DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS) Maisammaguda, Secunderabad 500100,Telangana State, India Telangana India 2)Dr.T SWAPNA 3)Dr.GSK GAYATRI DEVI 4)Dr.AMMANGI PRADEEP KUMAR 5)Dr.N.SUBBU LAKSHMI 6)Dr.TUMU SRINIVAS REDDY 7)Dr.KANAPARTHY RAJENDER PRASAD (72)Name of Inventor : 1)Dr.SIKHA MADHU BABU 2)Dr.T SWAPNA 3)Dr.GSK GAYATRI DEVI 4)Dr.AMMANGI PRADEEP KUMAR 5)Dr.N.SUBBU LAKSHMI 6)Dr.TUMU SRINIVAS REDDY 7)Dr.KANAPARTHY RAJENDER PRASAD</p>
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(57) Abstract :

An automated diabetic check device and a system to store results on cloud for report generation is the invention that aims at implementing a system to check the blood glucose level of an individual by himself without depending on the care taker to do so. The proposed invention has the automated needle system and the strip ejection mechanism for checking the blood glucose level by itself so that the user need not have to insert the strip and drop the blood on to the strip immediately which is tedious task. The invention also includes a mechanism for automated pricking and recording the results on the cloud for future analysis and report generation. Even the lay man can understand the results with the help of LED Lights which will indicate the result through red and green lights. The device will help the patient to get the diagnosis of blood glucose done by themselves rather than going to diagnostic centers or laboratories.

No. of Pages : 18 No. of Claims : 7

FORM 1
THE PATENTS ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003
APPLICATION FOR GRANT OF PATENT
[See sections 7,54 & 135 and rule 20(1)]

(FOR OFFICE USE ONLY)

Application No.:

Filing Date:

Amount of Fee Paid:

CBR No.:

Signature:

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3. TITLE OF THE INVENTION: AN AUTOMATED IOT BASED BLOOD GLUCOSE MEASUREMENT DEVICE ALONG WITH LED INDICATION

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5. PRIORITY PARTICULARS OF THE APPLICATION(S) FILED IN CONVENTION COUNTRY:

Sr.No.	Country	Application Number	Filing Date	Name of the Applicant	Title of the Invention
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6. PARTICULARS FOR FILING PATENT COOPERATION TREATY (PCT) NATIONAL PHASE APPLICATION:

International Application Number	International Filing Date as Allotted by the Receiving Office
PCT//	

7. PARTICULARS FOR FILING DIVISIONAL APPLICATION

Original (first) Application Number	Date of Filing of Original (first) Application
-------------------------------------	--

8. PARTICULARS FOR FILING PATENT OF ADDITION:

Main Application / Patent Number:	Date of Filing of Main Application
-----------------------------------	------------------------------------

9. DECLARATIONS:**(i) Declaration by the inventor(s)**

I/We ,Dr.SIKHA MADHU BABU,Dr.T SWAPNA,Dr.GSK GAYATRI DEVI,Dr.AMMANGI PRADEEP KUMAR,Dr.N.SUBBU LAKSHMI,Dr.TUMU SRINIVAS REDDY,Dr.KANAPARTHY RAJENDER PRASAD, is/are the true & first inventor(s) for this invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) of the inventor(s):

(c) Name(s): Dr.SIKHA MADHU BABU,Dr.T SWAPNA,Dr.GSK GAYATRI DEVI,Dr.AMMANGI PRADEEP KUMAR,Dr.N.SUBBU LAKSHMI,Dr.TUMU SRINIVAS REDDY,Dr.KANAPARTHY RAJENDER PRASAD

(ii) Declaration by the applicant(s) in the convention country

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) :

(c) Name(s) of the singnatory: Dr.SIKHA MADHU BABU,Dr.T SWAPNA,Dr.GSK GAYATRI
DEVI,Dr.AMMANGI PRADEEP KUMAR,Dr.N.SUBBU LAKSHMI,Dr.TUMU SRINIVAS
REDDY,Dr.KANAPARTHY RAJENDER PRASAD

(iii) Declaration by the applicant(s)

- **The Complete specification relating to the invention is filed with this application.**
- **I am/We are, in the possession of the above mentioned invention.**
- **There is no lawful ground of objection to the grant of the Patent to me/us.**

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

Sr.	Document Description	FileName
-----	----------------------	----------

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated hering are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this(Final Payment Date): -----

Signature:

Name: Gowthami S

To The Controller of Patents

The Patent office at CHENNAI

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FORM 9

THE PATENT ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003

REQUEST FOR PUBLICATION

[See section 11A (2) rule 24A]

I/We **Dr.SIKHA MADHU BABU****Dr.T SWAPNAD****Dr.GSK**
GAYATRI DEVI**Dr.AMMANGI PRADEEP**
KUMAR**Dr.N.SUBBU LAKSHMI****Dr.TUMU SRINIVAS**
REDDY**Dr.KANAPARTHY RAJENDER PRASAD** hereby
request for early publication of my/our [Patent Application No.]
202041004245 DATED **31 Jan 2020** UNDER SECTION 11A(2)
OF THE ACT.

Dated this(Final Payment Date):-----

Signature
(.....)

To,
The Controller of Patents,
The Patent Office
AT **CHENNAI**

This form is electronically generated.

FORM 2
THE PATENTS ACT, 1970
(39 OF 1970)
AND
THE PATENT RULES, 2003
COMPLETE SPECIFICATION
(See section 10 and rule 13)

Title of Invention:

**“AN AUTOMATED IOT BASED BLOOD GLUCOSE MEASUREMENT DEVICE
ALONG WITH LED INDICATION”**

Name of Applicant	Nationality	Address
Dr. SIKHA MADHU BABU	Indian	DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS) Maisammaguda, Secunderabad 500100,Telangana State, India
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The following specification describes the invention and the manner in which it is to be performed.

FIELD OF INVENTION:

[0001] The present invention relates to the field of Internet of Things based Diabetic check device. The proposed invention aims at developing and designing an automated diabetic check device which is user friendly and cost effective. The device is fully automated and the needle will choose the pricking area by itself. The strip is ejected out to the test area once the needle pricks the patient. The data of results will be stored on the device and cloud server along with indication by LED Lights.

BACKGROUND OF INVENTION:

[0002] Background description includes information that may be useful in understanding the present invention. It is not an admission that any of the information provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.

[0003] The pervasiveness of diabetes in India has remained at 11.8% in the last four years according to a national survey. Diabetes is one of the most talked diseases in India and also the fact is that India has more people with type 2 diabetes. Also the numbers of patients who are dependent on insulin are high too.

[0004] Though various types of devices to detect the blood glucose level instantly at home exist, the existing system is not automated and user friendly. In the existing devices the strip is given in a separate box and the blood sample has to be drawn manually. It is also difficult for the patient to use the device himself since the existing device needs a care taker to complete the process.

[0005] A number of different types of system and methods are there detecting the blood glucose level at home in the prior art. For example, the following patents are provided for their supportive teachings and are all incorporated by reference.

[0006] In this disclosure:US20040186365A1 discloses a Continuous glucose monitoring system and methods of use A continuous glucose monitoring system including a sensor configured to detect one or more glucose levels, a transmitter operatively coupled to the sensor, the transmitter configured to receive the detected one or more glucose levels, the transmitter further configured to transmit signals corresponding to the detected one or more glucose levels, and a receiver operatively coupled to the transmitter configured to receive transmitted signals corresponding to the detected one or more glucose levels, and methods thereof, are disclosed. In one aspect, the transmitter may be configured to transmit a current data point and at least one previous data point, the current data point and the at least one previous data point corresponding to the detected one or more glucose levels.

[0007] Yet another disclosure WO2004061420A3 discloses a Continuous glucose monitoring system and methods of use A continuous glucose monitoring system including a sensor (101) configured to detect one or more glucose levels, a transmitter (102) operatively coupled to the sensor, the transmitter configured to receive the detected one or more glucose levels, the transmitter further configured to transmit signals corresponding to the detected one or more glucose levels, and a receiver (104) operatively coupled to the transmitter configured to receive transmitted signals corresponding to the detected one or more glucose levels, and methods thereof, are disclosed. In one aspect, the transmitter may be configured to transmit a current data point and at least one previous data point, the current data point and the at least one previous data point corresponding to the detected one or more glucose levels.

[0008] Another prior art document: US6557484B1 discloses a Device for sugar and/or caffeine content indication .A drinking straw incorporates a sugar indicator section. When the straw is inserted into the drink, the indicator section changes color upon detection of sugar in the drink. This enables rapid and accurate detection of sugar in the drink. The sugar indicator straw may instead be formed as a drinking straw insert. The insert incorporates a “sleeve” through which a straw may be inserted. Then, when the straw is inserted into the drink, the insert changes color upon detection of sugar. The insert may then be disposed of. Further, the indicator may be incorporated in a drinking cup, preferably of the disposable kind. A section of the cup's wall is made porous, and the indicator is provided over the porous part. When liquid passes

through the porous part, the indicator changes color if the liquid contains sugar.

[0009] Yet another disclosure : US4890621A Continuous glucose monitoring and a system utilized there for discloses a continuous process for monitoring blood glucose level includes the steps of segregating a clear liquid component of blood from the protein and cells of the blood, wherein the clear liquid component includes the glucose to be monitored; continuously passing the clear liquid in a predetermined path between a light-emitting and a light-detecting device; detecting an optical property of the clear liquid component of the blood and employing the optical property to determine the glucose level in the blood. The invention also relates to the system for carrying out the continuous glucose monitoring process, and to a device for automatically controlling the pressure level in the system as a function of the breathing pattern of a patient in which the system is implanted.

[0010] Yet another prior art document EP2162056A1 discloses a Glucose meter system and monitor A handheld portable glucose meter (3002) includes a glucose sensor (3114) having a sensor output related to glucose in a blood sample. A display (3108) is configured to display information to a user. A manual input (3110) is configured to receive user input data from the user. Communication circuitry (3102) is configured to send and/or receive data to and/or from a remote location (3006). A controller (3104) controls operation of the handheld portable glucose meter (3002).

[0011] In yet another disclosure US20080097170A1 discloses a Blood glucose monitoring system. A blood glucose monitoring system, comprising (i) a blood glucose monitor for monitoring a blood glucose level and for producing digitally encoded blood glucose level signals representative of the blood glucose level, (ii) a programmable microprocessor-based portable unit, (iii) digital data storage media tangibly embodying therein processor-executable program instructions to signal process in response to signals based upon the digitally encoded blood glucose level signals and further to signal process insulin dosage data, and calibration information, (iv) a signal interface connected in signal communication with the programmable microprocessor-based portable unit and the blood glucose monitor for directly coupling the digitally encoded blood glucose level signals supplied by the blood glucose monitor to the programmable microprocessor-based portable unit, and (v) a signal processor for performing signal processing functions in accordance with the program.

[0012] Thus there is a constant need to design and implement an fully automated diabetic device from pricking to recording the read data on the cloud server so that the patient or his care taker can analyze the read values to know when the blood glucose was last checked. Also the level of blood glucose read by the device will be automatically sent as an alert message to the care taker of the user though they are not around the patient at that particular point of time.

[0013] In the proposed invention, since the device is fully automated the needle is clanged around the wrist of the patient or user. Once the hand is detected the device will choose the pricking area and the strip is automatically ejected to the test area. The blood sample is moved to the strip area through a canal. Once the blood reaches the strip area the diabetic value is displayed. The reading will also be sent as message to the mobile phone of the user or his caretaker. Also there are LED Lights that will indicate glow red to indicate that blood glucose level is more than the normal range and green light when the glucose level in the blood is normal.

[0014] The above information is presented as background information only to assist with an understanding of the present disclosure. No determination has been made, no assertion is made, and as to whether any of the above might be applicable as prior art with regard to the present invention.

[0015] In the view of the foregoing disadvantages inherent in the known types of diabetic check devices now present in the prior art, the present invention provides an improved system. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and improved IOT based diabetic check device that has all the advantages of the prior art and none of the disadvantages.

SUMMARY OF THE INVENTION:

[0016] In the view of the foregoing disadvantages inherent in the known types of Blood glucose monitoring system now present in the prior art, the present invention provides an improved methodology and a system to monitor the blood glucose with an automated check device. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and improved methodology which is based on Internet Of Things which has all the advantages of the prior art and none of the disadvantages.

[0017] The main objective of the invention is to design an automated diabetic device which can be used by the patient without the support of any care taker or doctor along with an alert message system.

[0018] Another object of the invention is that the device will have an automated prick system which will eject the needle once the user sets in the value.

[0019] Yet another object of the invention is that once the needle has finished pricking, the strip from the strip box is automatically pushed out to the area where the user will drop the blood sample.

[0020] Yet another object of the invention is that the Glucometer will start its process and display the glucose level in blood at the display unit along with a message to the user's mobile phone or any electronic gadgets.

[0021] Yet another object of invention is that the device includes LED Indicators. The red LED Light will glow when the blood glucose level is higher than normal range and glows green when the glucose level in blood is normal.

[0022] Yet another object of the invention is that the device also encloses a storage unit which will communicate the readings to the cloud server.

[0023] Yet another object of the invention is that the blood glucose levels stored on the cloud server can be retrieved to show the doctor and take his concern and suggestions.

[0024] In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[0025] These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF DRAWINGS:

[0026] The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

[0027] Figure 1, illustrates the Block Diagram of the automated diabetic check device; according to an embodiment herein.

[0028] Figure 2, illustrates the Flow Diagram of the automated diabetic check device; according to an embodiment herein.

DETAILED DESCRIPTION OF THE INVENTION:

[0029] In the following detailed description, reference is made to the accompanying drawings which form a part hereof, and in which is shown by

way of illustration specific embodiments in which the invention may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that the embodiments may be combined, or that other embodiments may be utilized and that structural and logical changes may be made without departing from the spirit and scope of the present invention. The following detailed description is, therefore, not to be taken in a limiting sense, and the scope of the present invention is defined by the appended claims and their equivalents.

[0030] While the present invention is described herein by way of example using several embodiments and illustrative drawings, those skilled in the art will recognize that the invention is neither intended to be limited to the embodiments of drawing or drawings described, nor intended to represent the scale of the various components. Further, some components that may form a part of the invention may not be illustrated in certain figures, for ease of illustration, and such omissions do not limit the embodiments outlined in any way. It should be understood that the drawings and detailed description thereto are not intended to limit the invention to the particular form disclosed, but on the contrary, the invention covers all modification/s, equivalents and alternatives falling within the spirit and scope of the present invention as defined by the appended claims. The headings are used for organizational purposes only and are not meant to limit the scope of the description or the claims. As used throughout this description, the word "may" is used in a permissive sense (i.e. meaning having the potential to), rather than the mandatory sense (i.e. meaning must). Further, the words "a" or "an" mean "at

least one” and the word “plurality” means one or more, unless otherwise mentioned. Furthermore, the terminology and phraseology used herein is solely used for descriptive purposes and should not be construed as limiting in scope. Language such as "including," "comprising," "having," "containing," or "involving," and variations thereof, is intended to be broad and encompass the subject matter listed thereafter, equivalents, and any additional subject matter not recited, and is not intended to exclude any other additives, components, integers or steps. Likewise, the term "comprising" is considered synonymous with the terms "including" or "containing" for applicable legal purposes. Any discussion of documents, acts, materials, devices, articles and the like is included in the specification solely for the purpose of providing a context for the present invention.

[0031] In this disclosure, whenever an element or a group of elements is preceded with the transitional phrase "comprising", it is understood that we also contemplate the same element or group of elements with transitional phrases "consisting essentially of," "consisting", "selected from the group consisting of", "including", or "is" preceding the recitation of the element or group of elements and vice versa.

[0032] The proposed invention is an automated diabetic check device that will help the patient to use individually without depending on others. The invention also includes an automatic strip ejection mechanism which will be pushed out once the needle finishes its pricking operation. The user will have to put the blood sample on the strip.

[0033] The glucometer will perform its operations and displays the glucose level in present in the sample on the display unit along with an alert message to the mobile phone or any connected electronic gadget of the user. Also the read values are stored on a memory unit which will be sent to the cloud server as well. The data stored on cloud can be used for further analysis and references.

[0034] Reference will now be made in detail to the exemplary embodiment of the present disclosure. Before describing the detailed embodiments that are in accordance with the present disclosure, it should be observed that the embodiment resides primarily in combinations arrangement of the system according to an embodiment herein and as exemplified in FIG. 1

[0035] Figure 1 illustrates the Block diagram of the proposed invention. The device 100 encloses a needle box 102 will be ready to prick the patient as per the input from the user. The needle box 102 will eject the needle out and prick the finger tip of the user. The strip box 101 will push a strip to the test area only after the completion of pricking process. The user will drop the blood sample on to the strip that is pushed out from strip box 101. The Glucometer 103 which encloses a sensor 104 will calculate the level of glucose present in the blood sample. The glucometer 103 will communicate the results to the display unit 106 with the help of sensor 104. The results from glucometer will also be communicated to the user's electronic gadget, the memory unit 105 as

well as the cloud server 107. The LED Light 108 will glow red to indicate the higher blood glucose level and green 109 for normal range of blood glucose.

[0036] Figure 2 illustrates the flow diagram of the device 100. The device 100 is switched on and the user will give input to the needle box 102 which will eject the needle to prick the finger tip of the user to collect the blood sample. The strip box 101 will receive the signal from needle box 102 once the pricking operation is complete. The strip box 101 will communicate with the glucometer 103 and sensor 104. The results from glucometer are passed on to the display unit 106 and memory unit 105. The glucometer results are also indicated by LED Lights 108 and 109 for higher and normal range respectively. The memory unit will in turn communicate with the cloud server 107 where results are stored for future references.

[0037] In the above description, for the purpose of explanation, numerous specific details are set forth in order to provide a thorough understanding of the arrangement of the system according to an embodiment herein. It will be apparent, however, to one skilled in the art, that the present embodiment can be practiced without these specific details. In other instances, structures are shown in block diagram form only in order to avoid obscuring the present invention.

I/WE CLAIM:

- 1) An automated diabetic check system to measure the blood glucose level comprises of a device, a strip box, a needle box, a sensor, a button, a Glucometer and its mechanism, a display unit, LED Lights, a memory unit and a cloud server.
- 2) As claimed in claim 1, the device 100 is switched on using a button. The user has to then set the needle pressure so that the needle will prick the finger tip of the patient.
- 3) As claimed in claim 2, once the needle has finished its pricking operation the strip box as claimed in claim 1 will be push out the strip.
- 4) As claimed in claim 1, the user has to place the blood sample on to strip that is ejected out and the glucometer will start its process to read out the value read that is the amount of glucose level present in the blood sample.
- 5) As claimed in claim1, the blood glucose level will be displayed on the display unit along with an alert message to the user's connected mobile phone or any electronic gadgets.

6) As claimed in claim 1, the results of diabetic check tests are also stored on a cloud server along with date and time so that the values can be used for further analysis and report generation.

7) As Claimed in claim 1, the device has Two Led Lights. The LED Light red will glow when blood glucose level is higher than normal range and the green light when the glucose level in blood is within the normal range.

ABSTRACT

“AN AUTOMATED IOT BASED BLOOD GLUCOSE MEASUREMENT DEVICE ALONG WITH LED INDICATION”

An automated diabetic check device and a system to store results on cloud for report generation is the invention that aims at implementing a system to check the blood glucose level of an individual by himself without depending on the care taker to do so. The proposed invention has the automated needle system and the strip ejection mechanism for checking the blood glucose level by itself so that the user need not have to insert the strip and drop the blood on to the strip immediately which is tedious task. The invention also includes a mechanism for automated pricking and recording the results on the cloud for future analysis and report generation. Even the lay man can understand the results with the help of LED Lights which will indicate the result through red and green lights. The device will help the patient to get the diagnosis of blood glucose done by themselves rather than going to diagnostic centers or laboratories.

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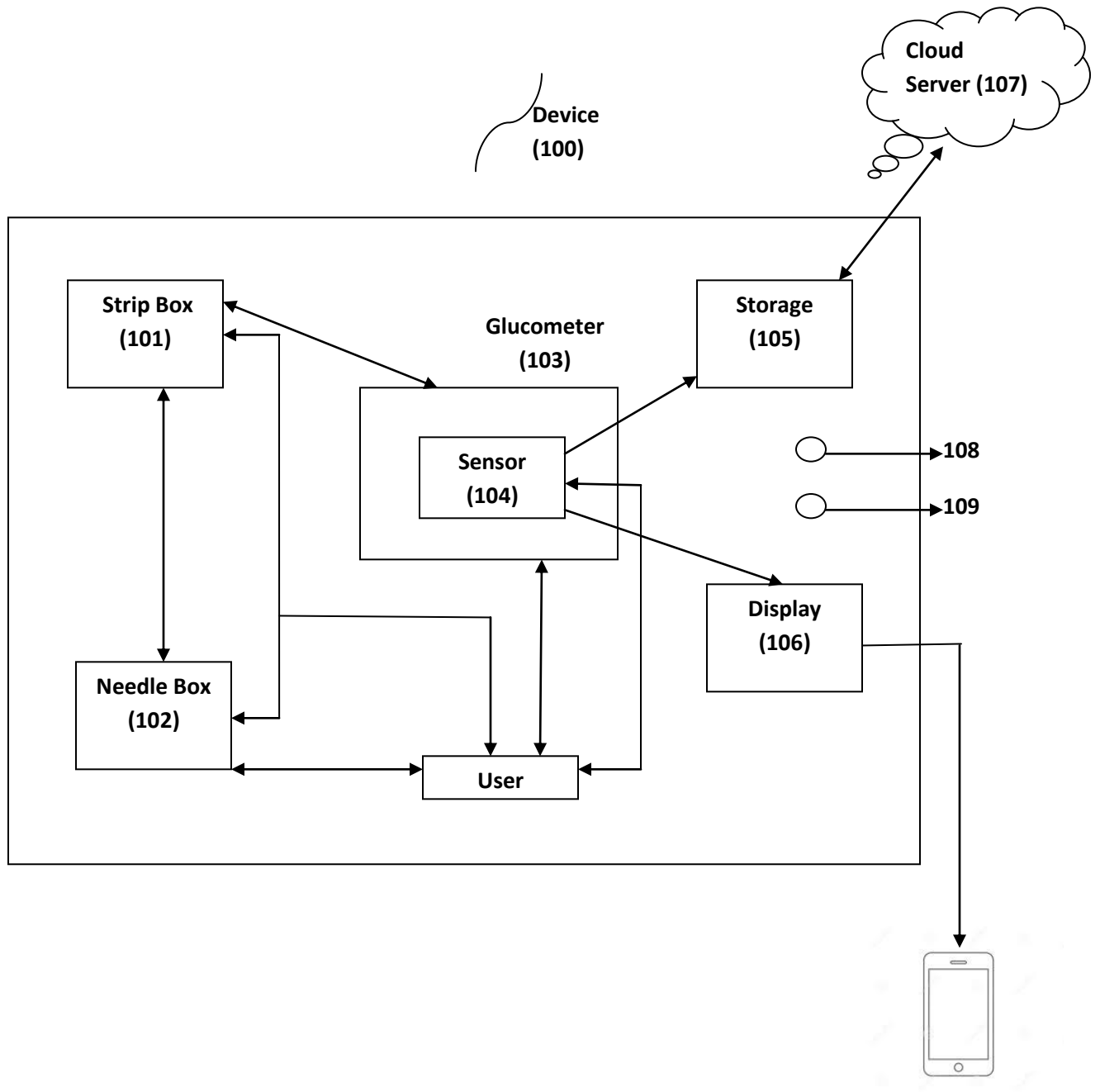


Fig 1: Block Diagram

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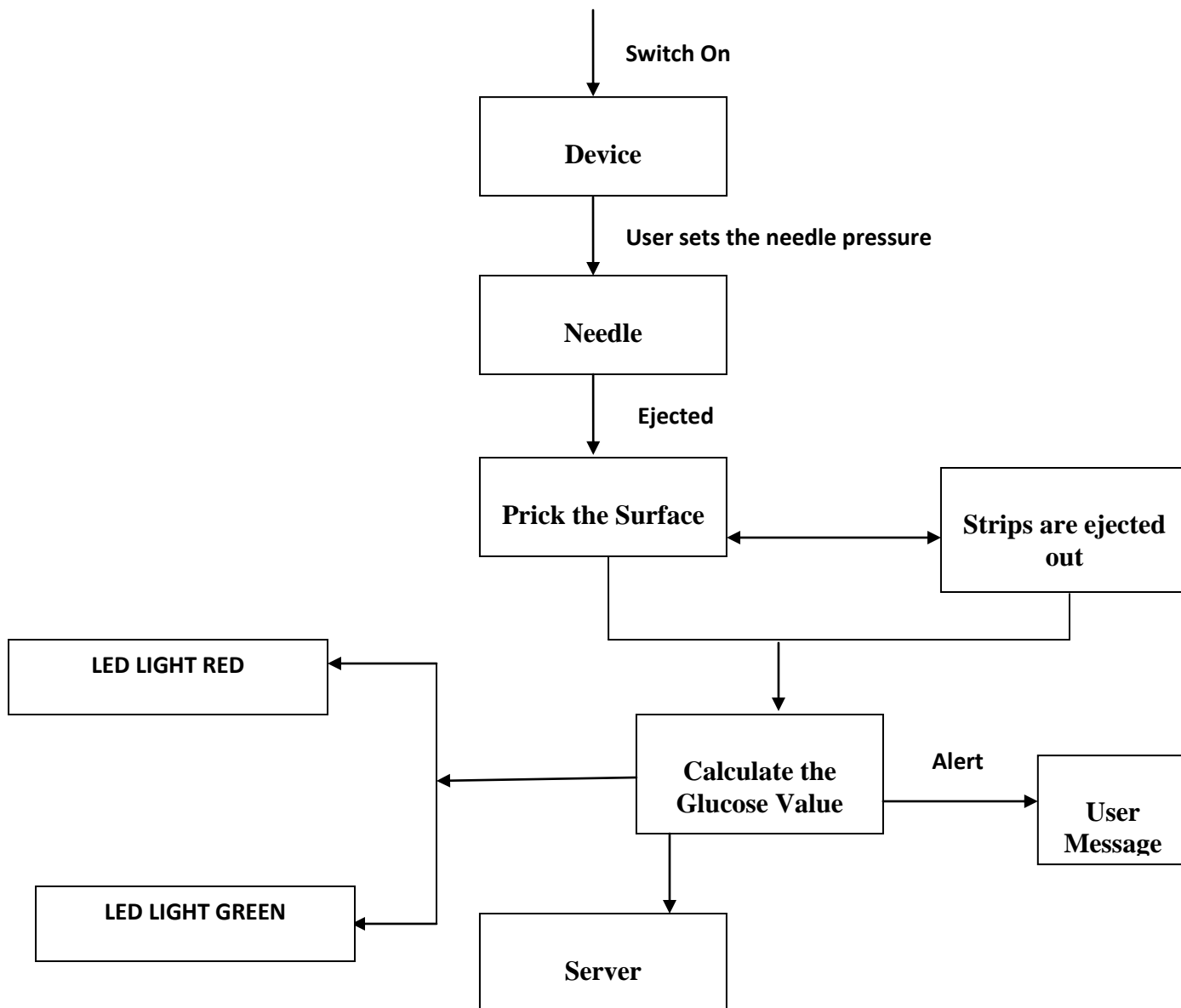


Fig 2: Flow Diagram

Dated: 31/01/2020

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