

ORIGINAL

क्रम सं/ Serial No.: 143852



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

389609-001

तारीख / Date

05/07/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **WIRELESS NETWORKING DEVICE FOR CONTROLLING HOME APPLIANCES** से संबंधित है, का पंजीकरण, श्रेणी 14-03 में 1.Dr. M. Malleswaran 2. Dr. Bharathi Gp 3.Ms. D. Ramalakshmi 4.Ms. R. Rajalakshmi 5.Ms. P.Muthumari 6.Dr. M. Ramkumar Prabhu के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-03 in respect of the application of such design to **WIRELESS NETWORKING DEVICE FOR CONTROLLING HOME APPLIANCES** in the name of 1.Dr. M. Malleswaran 2. Dr. Bharathi Gp 3.Ms. D. Ramalakshmi 4.Ms. R. Rajalakshmi 5.Ms. P.Muthumari 6.Dr. M. Ramkumar Prabhu.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 13/09/2023
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

(SPECIMEN OF REPRESENTATION SHEETS)

Name of Applicant:

- | | |
|-----------------------|---------------------------|
| 1. Dr. M. Malleswaran | 2. Dr. Bharathi GP |
| 3. Ms. D. Ramalakshmi | 4. Ms. R. Rajalakshmi |
| 5. Ms. P.Muthumari | 6. Dr. M. Ramkumar Prabhu |

Total Pages: 5

Page 1 of 5



PERSPECTIVE VIEW

The novelty resides in the shape and configuration of the **“WIRELESS NETWORKING DEVICE FOR CONTROLLING HOME APPLIANCES”** as Illustrated.

No claim is made by virtue of this registration in respect of any mechanical or other action of any mechanism whatever or in respect of any mode or principle of construction of the Article.

No claim is made by virtue of this registration to any right to the exclusive use of the words, letters, numbers, or trademarks appearing in the representation.

Date -4th July, 2023

Signature of the Agent
Saurabh Kumar Jain, (IN/PA-3637)

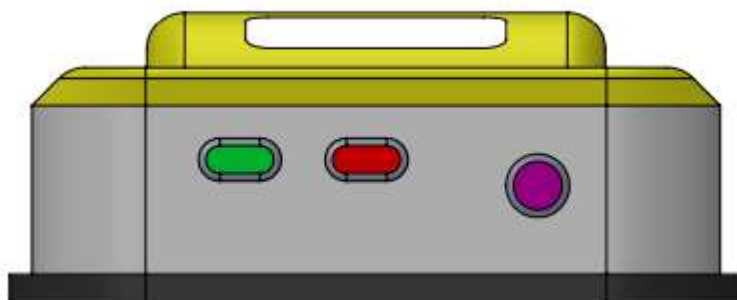
(SPECIMEN OF REPRESENTATION SHEETS)

Name of Applicant:

1. Dr. M. Malleswaran 2. Dr. Bharathi GP
3. Ms. D. Ramalakshmi 4. Ms. R. Rajalakshmi
5. Ms. P.Muthumari 6. Dr. M. Ramkumar Prabhu

Total Pages: 5

Page 2 of 5



FRONT VIEW



REAR VIEW

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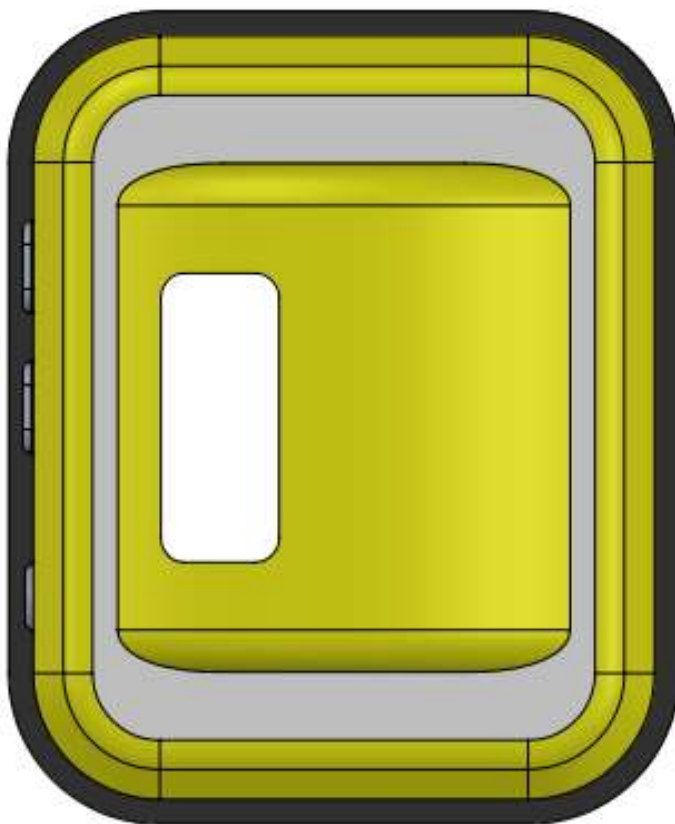
(SPECIMEN OF REPRESENTATION SHEETS)

Name of Applicant:

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| 1. Dr. M. Malleswaran | 2. Dr. Bharathi GP |
| 3. Ms. D. Ramalakshmi | 4. Ms. R. Rajalakshmi |
| 5. Ms. P.Muthumari | 6. Dr. M. Ramkumar Prabhu |

Total Pages: 5

Page 3 of 5



TOP VIEW

The novelty resides in the shape and configuration of the **“WIRELESS NETWORKING DEVICE FOR CONTROLLING HOME APPLIANCES”** as Illustrated.

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Date -4th July, 2023

Signature of the Agent
Saurabh Kumar Jain, (IN/PA-3637)

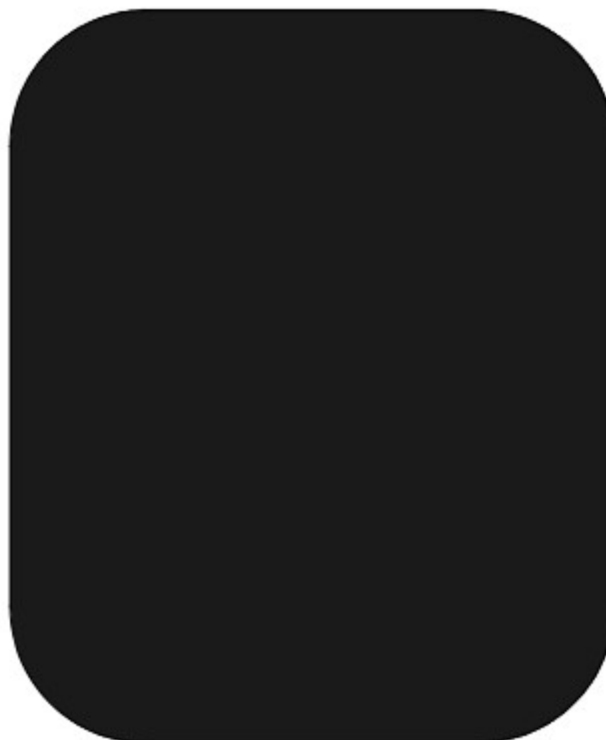
(SPECIMEN OF REPRESENTATION SHEETS)

Name of Applicant:

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|-----------------------|---------------------------|
| 1. Dr. M. Malleswaran | 2. Dr. Bharathi GP |
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Total Pages: 5

Page 4 of 5



BOTTOM VIEW

The novelty resides in the shape and configuration of the “**WIRELESS NETWORKING DEVICE FOR CONTROLLING HOME APPLIANCES**” as illustrated.

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Date -4th July, 2023

A handwritten signature in blue ink, reading 'Saurabh', with a stylized flourish.

Signature of the Agent
Saurabh Kumar Jain, (IN/PA-3637)

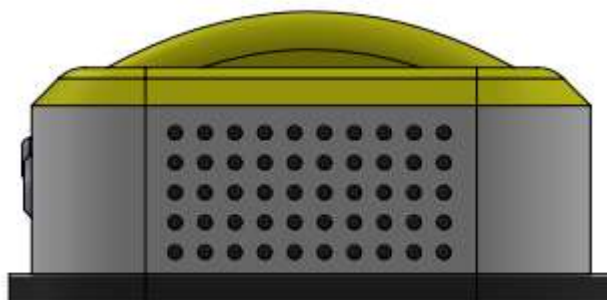
(SPECIMEN OF REPRESENTATION SHEETS)

Name of Applicant:

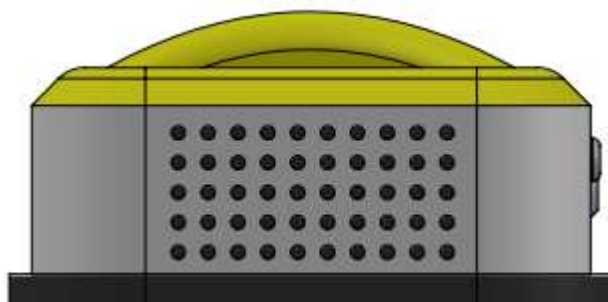
- | | |
|-----------------------|---------------------------|
| 1. Dr. M. Malleswaran | 2. Dr. Bharathi GP |
| 3. Ms. D. Ramalakshmi | 4. Ms. R. Rajalakshmi |
| 5. Ms. P.Muthumari | 6. Dr. M. Ramkumar Prabhu |

Total Pages: 5

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LEFT SIDE VIEW



RIGHT SIDE VIEW

The novelty resides in the shape and configuration of the **“WIRELESS NETWORKING DEVICE FOR CONTROLLING HOME APPLIANCES”** as Illustrated.

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Date -4th July, 2023

Signature of the Agent
Saurabh Kumar Jain, (IN/PA-3637)



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Account Reference : NEWIMPACC (SV)/ up14008604/ GAUTAMBUDDH NAGAR 2/ UP-GBN
Unique Doc. Reference : SUBIN-UPUP1400860462649045059677V
Purchased by : SAURABH KUMAR JAIN
Description of Document : Article 48 Power of Attorney
Property Description : Not Applicable
Consideration Price (Rs.) :
First Party : NA
Second Party : SAURABH KUMAR JAIN
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Form 21
General Power of authority to agent
 (Section 43)

In connection with Filing, Prosecution and Registration of Design Application,

We,

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Dr. K. Pavendan	Indian	Assistant Professor, Department of Computer and Communication Engineering, Sri Sairam Institute Of Technology, Sai Leo Nagar, West Tambaram, Chennai-600044, Kanchipuram, Tamil Nadu, India.

, hereby authorize

Saurabh Kumar Jain (IN/PA-3637) registered patent agent of Senan IP,F-440, Delta-1, Greater Noida, UP- 201310, India.

to act as my or our agent and to appoint a substitute or substitutes as and when necessary to receive all notices, requisitions and communications until further notice and to appoint a substitute or substitutes as and when necessary.

And we revoke all previous authorizations, if any, in respect of the same matters or proceedings given by us.

Dated this 23rd Day of June 2023

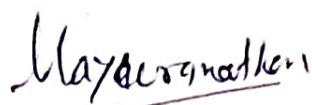
Signature:

Name:

Mrs. G. Akilandasowmya

Mrs. G. Nirmaladevi

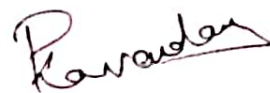
Mrs. C. Geetha



Dr. M. Mayuranathan



Dr. K. Sundara Velrani



Dr. K. Pavendan

To
The Controller of Designs,
The Patent Office, Kolkata

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/11/2023

(21) Application No.202341079532 A

(43) Publication Date : 01/12/2023

(54) Title of the invention : MOBILE APPLICATION BASED SLEEP APNOEA MANAGEMENT SYSTEM FOR BIOMEDICAL EXERTION USING CLOUD SERVER

(51) International classification :A61B0005080000, A61B0005000000, A61M0021020000, A61B0005010000, A61P0025200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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4)M. MAHARASI
5)B BALASAIGAYATHRI
6)RAJA RAJESWARI P U
7)P. MENAGA
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9)S RAMAMOORTHY
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Address of Applicant : NA
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(57) Abstract :

A person's life and health depend on getting enough sleep, which helps to recharge both the body and the mind. The quality of sleep has a huge impact on everyone's lifestyle 'and helps I fend against many ailments. There have been many people who have had problems falling . asleep for a very long time. The term sleep apnoea is used to represent a number of sleep disorders that can affect persons who have a wide range of conditions. Because of The various physical changes that occur when we sleep, many people pass away in our sleep.' A sleep monitoring system is therefore essential. The user will be able to assess different sleep indices, and any irregularities would be reported via a mobile application. Throughout their .whole sleep,- the system can monitor a person's ECG, breathing rate, skin reaction, and oximeter thanks to its array of sensors. This study is capable of collecting and broadcast the' . sleep indices on the mobile application' simultaneously without disturbing the participant thanks to a IoT module. Anyone can use the system because (if the way it has been designed. , According to the findings, this study also considers 'individuals who aren't at danger of experiencing sleep problems. This study will assist readers in understanding sleep 'apnoea, recognizing it, and taking the appropriate precautions

No. of Pages : 19 No. of Claims : 6



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Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

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Application Details

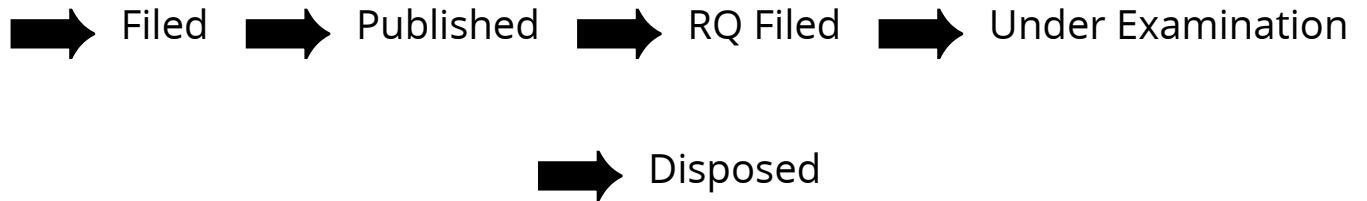
APPLICATION NUMBER	202341079532
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	23/11/2023
APPLICANT NAME	1 . Dr. ISHWARYA M. V 2 . Dr. D. ADHIMUGA SIVASAKTHI 3 . Dr. A. SATHIYARAJ 4 . M. MAHARASI 5 . B BALASAIGAYATHRI 6 . RAJA RAJESWARI P U 7 . P. MENAGA 8 . Dr. R RATHEESH 9 . S RAMAMOORTHY
TITLE OF INVENTION	MOBILE APPLICATION BASED SLEEP APNOEA MANAGEMENT SYSTEM FOR BIOMEDICAL EXERTION USING CLOUD SERVER
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	aidshod@act.edu.in
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	01/12/2023

Application Status

APPLICATION STATUS

Awaiting Request for Examination

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Department of Industrial Policy & Promotion,
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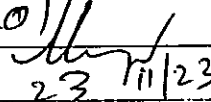
Document Name	*Created Date/Uploaded Date
202341079532-Form 1-231123.pdf	28/11/2023
202341079532-Form 2(Title Page)-231123.pdf	28/11/2023
202341079532-Form 9-231123.pdf	28/11/2023

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15/11/23

PT622

D/126227

"FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 20)				(FOR OFFICE USE ONLY)	
				Application No.	202341079532
				Filing date:	23-11-2023
				Amount of Fee paid:	1750/-
				CBR No:	54201/1
				Signature:	 23/11/23
1. APPLICANT'S REFERENCE /IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANT(S)					
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			State	Tamil Nadu

			Country	India
			Pin code	602 105
Name in Full	Nationality	Country of Residence	Address of the Applicant	
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			Country	India
			Pin code	600 130
Name in Full	Nationality	Country of Residence	Address of the Applicant	
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			City	Chennai
			State	Tamil Nadu
			Country	India
			Pin code	600 130
3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]				
Natural Person (✓)	Other than Natural Person			
	Small Entity ()	Startup ()	Others ()	
4. INVENTOR(S) [Please tick (✓) at the appropriate category]				
Are all the inventor(s)	Yes (✓)	No ()		
same as the applicant(s) named above?				
5. TITLE OF THE INVENTION: MOBILE APPLICATION BASED SLEEP APNOEA MANAGEMENT SYSTEM FOR BIOMEDICAL EXERTION USING CLOUD SERVER				
6. AUTHORISED REGISTERED PATENT		IN/PA No.		

AGENT(S)		Name			
		Mobile No.			
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		Mobile No.		+ (91) – 97898 27194	
		Fax No.			
		E-mail ID		aidshod@act.edu.in	
		8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION			
Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)
9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)					
International application number			International filing date		
10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION					
Original (first) application No.			Date of filing of original (first) application		
11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT					
Main application/patent No.			Date of filing of main application		
12. DECLARATIONS					

(i) Declaration by the inventor

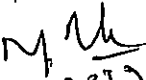
(In case the applicant is an assignee: the inventor may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

We, the above-named inventor are the true & first inventor for this Invention and declare that the applicant herein is our assignee or legal representative.

(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Dr. ISHWARYA M. V

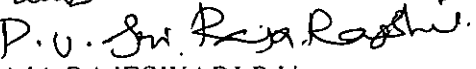
(a) Date: 23/11/2023
(b) Signature: 
(c) Name: Dr. D. ADHIMUGA SIVASAKTHI

(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Dr. A. SATHIYARAJ

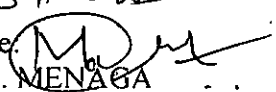
(a) Date: 23.11.2023 
(b) Signature: (M. MAHARASI)
(c) Name: M. MAHARASI

(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Ms. B BALASAIGAYATHRI

(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Ms. NIVEDHA R

(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Sri RAJA RAJESWARI P U

(a) Date: 23.11.2023.

(b) Signature: 

(c) Name: P. MENAGA

(a) Date: 23.11.2023.

(b) Signature: 

(c) Name: Dr. R. RATHESH

(a) Date: 23.11.2023.

(b) Signature: 

(c) Name: S RAMAMOORTHY

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

~~(In case the applicant in India is different than the applicant in the convention country: the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)~~

~~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 signatory~~

(iii) Declaration by the applicant(s)

We the applicant(s) hereby declare(s) that: -

We are in possession of the above-mentioned invention.

The provisional/complete specification relating to the invention is filled with this Application.

☐ The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us-NA

☐ There is no lawful ground of objection(s) to the grant of the Patent to me/us. - NA
We are the true & first inventor(s).

We are the assignee or legal representative of true & first inventor(s).

☐ The application or each of the applications, particulars of which are given in Paragraph-8, was the first application in convention country/countries in respect of my/our invention(s)-NA

We claim the priority from the above-mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which We derive the title.

☐ My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph-9- NA

The application is divided out of my /our application particulars of which is given in Paragraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act

☐ The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph-11 – NA

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete specification) #	No. of pages - One		
No. of Claim(s)	No. of claims Six and No. of pages – Two		
Abstract	No. of pages - One		
No. of Drawing(s)	No. of drawings and No. of pages – Seven and Five		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

(b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(c) Sequence listing in electronic form

(d) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(e) Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.

(f) Translation of priority document/Specification/International Search Report/International Preliminary Report on Patentability.

(g) Statement and Undertaking on Form 3

(h) Declaration of Inventorship on Form 5

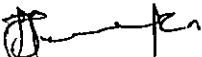
(i) _____ Power _____ of _____ Authority

(j) _____

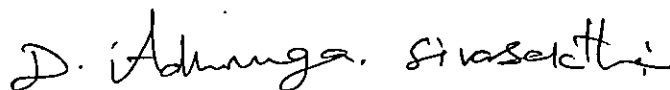
Total fee Rs. 4,500.00 in bearing Demand Draft No. 215123 Dated 21.11.2023 drawn on Axis Bank, Nanganallur Branch.

We hereby declare that to the best of our knowledge, information and belief the fact and matters slated herein are correct and We request that a patent may be granted to us for the said invention.

Dated this Thursday of 23rd of November 2023

(a) Signature: 

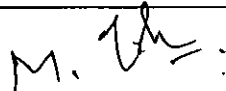
(b) Name: Dr. ISHWARYA M. V

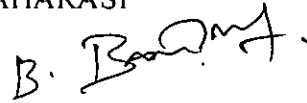
(a) Signature: 

(b) Name: Dr. D. ADHIMUGA SIVASAKTHI

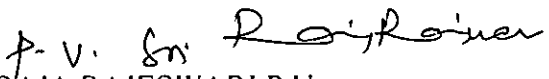
(a) Signature: 

(b) Name: Dr. A. SATHIYARAJ

(a) Signature: 
(b) Name: M. MAHARASI

(a) Signature: 
(b) Name: Ms. B BALASAIGAYATHRI

(a) Signature: 
(b) Name: Ms. NIVEDHA R

(a) Signature: 
(b) Name: Sri RAJA RAJESWARI P U

(a) Signature: 
(b) Name: P. MENAGA

(a) Signature: 
(b) Name: Dr. R. RATHEESH

(a) Signature: 
(b) Name: S RAMAMOORTHY

To,

The Controller of Patents

The Patent Office, at Guindy, Chennai – 600 032.

Note: -

- * Repeat boxes in case of more than one entry.
- * To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
- * Tick (✓)/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
- * Name of the inventor and applicant should be given in full, family name in the beginning.
- * Strike out the portion which is/are not applicable.
- * For fee: See First Schedule”;



710049845

THE GAZETTEE OF INDIA – EXTRAORDINARY [PART II—Sec 3(ii)]

FORM 2
THE PATENT ACT 1970
(39 of 1970)
&
The Patents Rules, 2003
COMPLETE SPECIFICATION
(See Section 10 and Rule 13)

COMPLETE

**MOBILE APPLICATION BASED SLEEP APNOEA MANAGEMENT
SYSTEM FOR BIOMEDICAL EXERTION USING CLOUD SERVER**

1. APPLICANT

(a) NAME: Dr. ISHWARYA M. V, Dr. D. ADHIMUGA SIVASAKTHI,
Dr. A. SATHIYARAJ, M. MAHARASI, Ms. B BALASAIGAYATHRI,
Ms. NIVEDHA R, Sri RAJA RAJESWARI P U, P. MENAGA,
Dr. R. RATHEESH, S RAMAMOORTHY

The following specification particularly describes the invention
and the manner in which it is to be performed

Field of Invention

The continuous positive airway pressure (CPAP) therapy is the treatment of choice for obstructive sleep apnea (OSA), however patients' adherence to the therapy is typically less than ideal. Therefore, novel therapies that are centred on the patient's experience are required to improve compliance. The mobile health (mHealth) technology looks to be especially well-suited for this purpose due to the fact that it is both inexpensive and widely available. APPnea is the name of the mobile health application that we worked hard to build with the intention of encouraging patients to self-monitor their CPAP therapy. After that, we examined the viability of APPnea in a sample of OSA patients and determined that it was both feasible and acceptable. Six weeks of treatment with APPnea was administered to a series of OSA patients. This mobile health intervention is not only doable but also meets the needs of patients in a suitable manner. Although bigger randomised trials and cost-effectiveness studies need be undertaken, this research demonstrates that APPnea might stimulate involvement and improve compliance among patients with OSA, hence improving outcomes. These studies should be performed.

Background of Invention

A person's life and health are not complete without sufficient amounts of sleep since it is at this time that one may restore and revitalise both their mind and their body. In order to prevent a wide range of ailments, a person's lifestyle should place a significant emphasis on getting sufficient quality sleep. For a very long time, poor sleep has been a significant issue for a large number of individuals. People who are afflicted with a variety of conditions may struggle with a variety of sleeping problems, the most prevalent of which is sleep apnea. Because of the unbalanced bodily changes that occur during sleep, a significant number of individuals lose their lives. In light of this, having some kind of apparatus that tracks one's sleep is of critical significance. The vast majority of the systems that have been developed in the past to monitor sleeping disorders are unable to cope with the issue of real-time sleeping since they only generate data after a specific amount of time has passed. Monitoring one's sleep in real time is essential for identifying cases of sleep apnea.

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5 Object of Invention

- ❖ Battery
- ❖ Controller
- ❖ ECG Sensor
- ❖ Pulse Oximeter
- ❖ Heart Rate Sensor
- ❖ IoT Module

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5 Summary of Invention

In order to find a solution to this issue, a real-time sleep apnea monitoring system that is based on the Internet of Things (IoT) has been created. The user will be able to monitor their sleep using a variety of indices, and they will get alerts through a mobile application if anything out of the ordinary takes place. The device is equipped with a number of sensors that can monitor a person's electrocardiogram (ECG), heart rate, pulse rate, skin reaction, and SpO2 while they are sleeping. This study is quite helpful since it can test sleep indices without waking the person up, and it can also present the results on a mobile application simultaneously with the use of a Bluetooth module. Both of these capabilities are very valuable. The programme was designed to be user-friendly, making it applicable to a wide range of different types of people. In order to measure the various components of the sleep factor, we utilise the Arduino UNO in conjunction with a variety of analogue sensors. The procedure was seen and evaluated while being carried out on the bodies of several individuals. The system keeps an eye on many individuals while they are sleeping so that it may do real-time analysis and diagnosis of sleep apnea. The findings are shown in the mobile application as well as on the monitor that is attached to each Arduino board. The analysis of the collected data may identify sleep apnea in some of the individuals who the system observed, and it can also reveal the reason why sleep apnea occurs in certain individuals. Using the collected data, this study also investigates the characteristics of individuals who are not at risk for developing sleeping disorders. This article will assist everyone in gaining knowledge about sleep apnea, detecting its symptoms, and taking the appropriate precautions to ward against the condition.

A problem known as sleep apnea is characterised by a parallel connection between the human respiratory system and our brain. It suggests that there is a difficulty with breathing and impediments to respiration when the individual is sleeping. Sleep apnea may be broken down into two categories: obstructive sleep apnea (OSA) and central sleep apnea (CSA). There are occasions when you'll experience both of them at the same instant. It is possible to have complicated sleep apnea, however the condition is so uncommon that it cannot be classified as a kind of apnea. Obstructive sleep apnea, often known as OSA, is essentially a congestion of the upper airway. It is brought on by a relaxation of the muscles in our throats, as well as a reduction in the amount of oxygen that travels down the channel between our nose and our throats. This leads to discomfort when breathing, which may occasionally result in more

5 severe difficulties. Central sleep apnea is less common but more concerning than obstructive
sleep apnea (OSA). The human brain is the most important maintenance centre of the whole
body since every organ and system operates on its directed signal or instruction. As a result,
the human brain's central sleep apnea is subject to significant scrutiny. When the brain fails to
transmit the required instructions or signals to the system that governs our breathing and
10 respiration, this may lead to central sleep apnea. In this case, neurons are unable to send
signals to the breathing muscle, which results in a significant delay in the inhalation of air.
This delay might last for up to ten seconds. And in really unusual circumstances, both of
these things may occur at the same time, which is a problem that requires more than just
immediate medical attention and is also quite concerning.

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5 Detailed Description of Invention.

A system that holds chemical energy & transforms it to electric power is a battery. The chemical processes in a battery require the movement of electrons through an electric field from one substrate (electrode) to the next. An electric charge that can be used to do research is given by the movement of electrons.

10 In an embedded device, a controller is a small integrated circuit programmed to control a particular operation. A traditional controller requires peripheral devices on a single chip for a CPU, memory & input/output (I/O). To control the overall operation of the module like a CPU of a computer.

(4) Figure (iv) shows the Wi-Fi Module

15 The ESP8266 Wi-Fi Module is a self-contained SOC with integrated TCP/IP protocol stack that can give any microcontroller access to your Wi-Fi network. The ESP8266 is capable of either hosting an application or offloading all Wi-Fi networking functions from another application processor. An ESP8266 Wi-Fi module is a SOC microchip mainly used for the development of end-point IoT (Internet of things) applications. It is referred to as a
20 standalone wireless transceiver, available at a very low price. It is used to enable the internet connection to various applications of embedded systems. Espressif systems designed the ESP8266 Wi-Fi module to support both the TCP/IP capability and the microcontroller access to any Wi-Fi network. It provides the solutions to meet the requirements of industries of IoT such as cost, power, performance, and design. It can work as either a slave or a standalone
25 application. If the ESP8266 Wi-Fi runs as a slave to a microcontroller host, then it can be used as a Wi-Fi adaptor to any type of microcontroller using UART or SPI. If the module is used as a standalone application, then it provides the functions of the microcontroller and Wi-Fi network. The ESP8266 Wi-Fi module is highly integrated with RF balun, power modules, RF transmitter and receiver, analog transmitter and receiver, amplifiers, filters, digital
30 baseband, power modules, external circuitry, and other necessary components.

(5) Figure (v) shows the AD8232 ECG Sensor

This sensor is a cost-effective board used to measure the electrical activity of the heart. This electrical activity can be charted as an ECG or Electrocardiogram and output as an analog reading. ECGs can be extremely noisy, the AD8232 Single Lead Heart Rate Monitor acts as
35 an op-amp to help obtain a clear signal from the PR and QT Intervals easily. The AD8232 is

5 an integrated signal conditioning block for ECG and other biopotential measurement applications. It is designed to extract, amplify, and filter small biopotential signals in the presence of noisy conditions, such as those created by motion or remote electrode placement. The AD8232 module breaks out nine connections from the IC that you can solder pins, wires, or other connectors to. SDN, LO+, LO-, Output, 3.3V, GND provide
10 essential pins for operating this monitor with an Arduino or other development board. Also provided on this board are RA (Right Arm), LA (Left Arm), and RL (Right Leg) pins to attach and use your own custom sensors. Additionally, there is an LED indicator light that will pulsate to the rhythm of a heartbeat. The AD8232 ECG sensor is a commercial board used to calculate the electrical movement of the human heart. This action can be chart like an
15 Electrocardiogram and the output of this is an analog reading. Electrocardiograms can be very noisy, so to reduce the noise the AD8232 chip can be used. The working principle of the ECG sensor is like an operational amplifier to help in getting a clear signal from the intervals simply. The AD8232 sensor is used for signal conditioning in ECG as well as other measurement applications of biopotential. The main purpose of this chip is to amplify, extract
20 as well as filter biopotential signals which are small in the noisy conditions like those formed through the replacement of remote electrode as well as motion.

(6) Figure (vi) shows the Heart Beat Sensor

The basic heartbeat sensor consists of a light emitting diode and a detector like a light detecting resistor or a photodiode. The heart beat pulses cause a variation in the flow of blood
25 to different regions of the body. When a tissue is illuminated with the light source, i.e., light emitted by the led, it either reflects (a finger tissue) or transmits the light (earlobe). Some of the light is absorbed by the blood and the transmitted or the reflected light is received by the light detector. The amount of light absorbed depends on the blood volume in that tissue. The LED needs to be of super-bright intensity because maximum light passes and spreads if a
30 finger placed on the LED is detected by the detector. Now, when the heart pumps blood through the blood vessels, the finger becomes slightly more opaque; due to this, less amount of light reaches from the LED to the detector. With every heart pulse generated, the detector signal gets varied. The varied detector signal is converted into an electrical pulse. This electrical signal gets amplified and triggered through an amplifier which gives an output of
35 +5V logic level signal. The output signal is also directed by a LED display that blinks on each heartbeat rate.

5 (7) Figure (vii) shows the Pulse Oximeter

Pulse oximetry is a non-invasive method for monitoring a person's oxygen saturation. Peripheral oxygen saturation (SpO_2) readings are typically within 2% accuracy (within 4% accuracy in the worst 5% of cases) of the more desirable (and invasive) reading of arterial oxygen saturation (SaO_2) from arterial blood gas analysis. But the two are correlated well enough that the safe, convenient, non-invasive, inexpensive pulse oximetry method is valuable for measuring oxygen saturation in clinical use. The most common approach is transmissive pulse oximetry. In this approach, a sensor device is placed on a thin part of the patient's body, usually a fingertip or earlobe, or an infant's foot. Fingertips and earlobes have higher blood flow rates than other tissues, which facilitates heat transfer. The device passes two wavelengths of light through the body part to a photodetector. It measures the changing absorbance at each of the wavelengths, allowing it to determine the absorbances due to the pulsing arterial blood alone, excluding venous blood, skin, bone, muscle, fat, and (in most cases) nail polish. Pulse oximetry is a simple, relatively cheap and non-invasive technique to monitor oxygenation. It monitors the percentage of haemoglobin that is oxygen-saturated. Oxygen saturation should always be above 95%, although in those with long-standing respiratory disease or cyanotic congenital heart disease, it may be lower, corresponding to disease severity. The oxyhaemoglobin dissociation curve becomes sharply steep below about 90%, reflecting the more rapid desaturation that occurs with diminishing oxygen partial pressure (PaO_2). On most machines the default low oxygen saturation alarm setting is 90%. Pulse oximetry does not provide information on the oxygen content of the blood or on ventilation.

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5 Drawings

Block Diagram

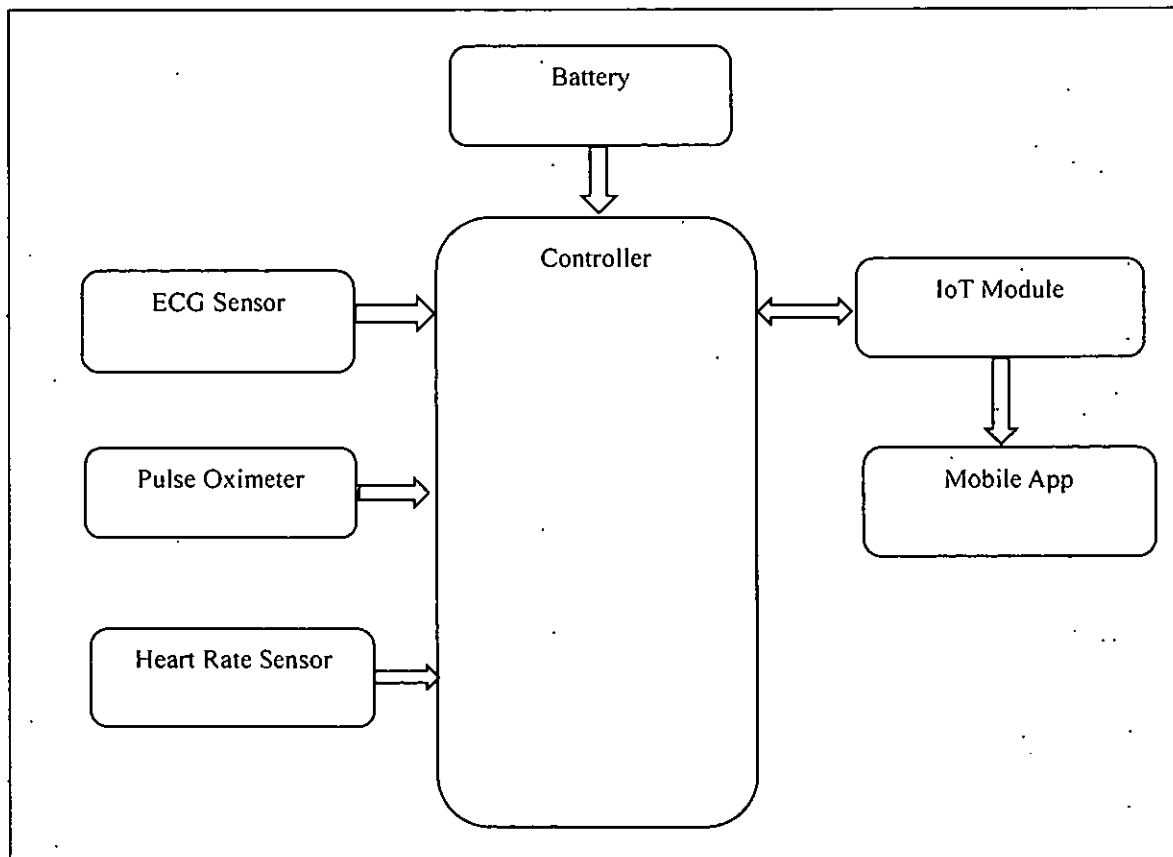


Figure (i) shows the Block Diagram



Figure (ii) shows the Power Supply or Battery

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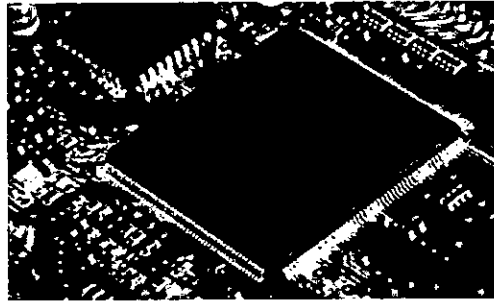


Figure (iii) shows the Controller

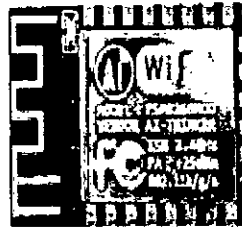


Figure (iv) shows the Wi-Fi Module

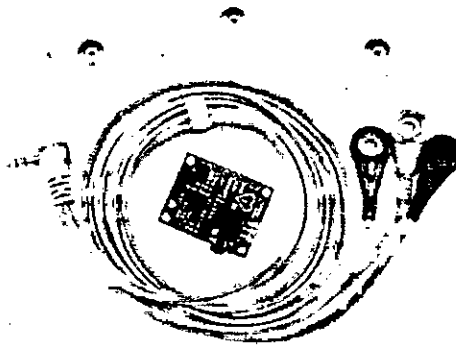


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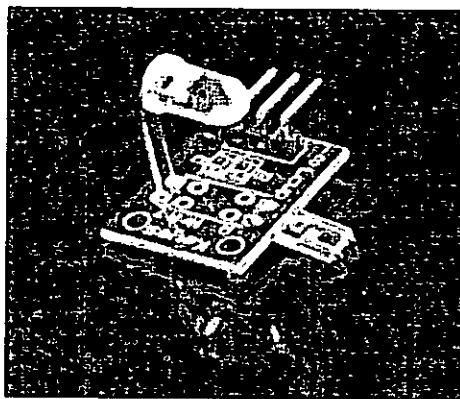


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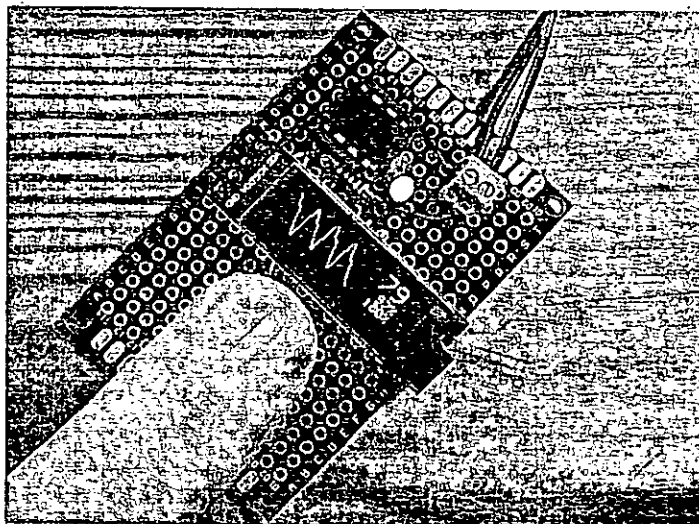


Figure (vii) shows the Pulse Oximeter

5 Detailed Description of Drawings

(1) Figure (i) shows the Block Diagram

(2) Figure (ii) shows the Power Supply or Battery

A system that holds chemical energy & transforms it to electric power is a battery. The chemical processes in a battery require the movement of electrons through an electric field from one substrate (electrode) to the next. An electric charge that can be used to do research is given by the movement of electrons.

(3) Figure (iii) shows the Controller

In an embedded device, a controller is a small integrated circuit programmed to control a particular operation. A traditional controller requires peripheral devices on a single chip for a CPU, memory & input/output (I/O). To control the overall operation of the module like a CPU of a computer.

(4) Figure (iv) shows the Wi-Fi Module

The ESP8266 Wi-Fi Module is a self-contained SOC with integrated TCP/IP protocol stack that can give any microcontroller access to your Wi-Fi network. The ESP8266 is capable of either hosting an application or offloading all Wi-Fi networking functions from another application processor.

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The AD8232 module breaks out nine connections from the IC that you can solder pins, wires, or other connectors to. SDN, LO+, LO-, Output, 3.3V, GND provide essential pins for operating this monitor with an Arduino or other development board. Also provided on this board are RA (Right Arm), LA (Left Arm), and RL (Right Leg) pins to attach and use your

5 own custom sensors. Additionally, there is an LED indicator light that will pulsate to the rhythm of a heartbeat.

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10 The basic heartbeat sensor consists of a light emitting diode and a detector like a light detecting resistor or a photodiode. The heart beat pulses cause a variation in the flow of blood to different regions of the body. When a tissue is illuminated with the light source, i.e., light emitted by the led, it either reflects (a finger tissue) or transmits the light (earlobe). Some of the light is absorbed by the blood and the transmitted or the reflected light is received by the light detector. The amount of light absorbed depends on the blood volume in that tissue. The
15 detector output is in form of electrical signal and is proportional to the heart beat rate.

(7) Figure (vii) shows the Pulse Oximeter

Pulse oximetry is a non-invasive method for monitoring a person's oxygen saturation. Peripheral oxygen saturation (SpO_2) readings are typically within 2% accuracy (within 4% accuracy in the worst 5% of cases) of the more desirable (and invasive) reading of arterial
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25 higher blood flow rates than other tissues, which facilitates heat transfer. The device passes two wavelengths of light through the body part to a photodetector. It measures the changing absorbance at each of the wavelengths, allowing it to determine the absorbances due to the pulsing arterial blood alone, excluding venous blood, skin, bone, muscle, fat, and (in most cases) nail polish.

Different Embodiment of Invention

- i. A fundamental microcontroller and a selection of the most important health-related sensors were used in the process of developing and implementing the system. A very simple web application for app development was used in the production of the mobile application.
- ii. After analysing the data from five different persons, the system provides findings that are highly enough for making conclusions about sleep apnea. According to the findings, it is evident that two individuals do not exhibit any symptoms that are associated with any kind of sleep apnea.
- iii. Major difficulties with sleep circumstances are being experienced by one individual between the ages of 36 and 50. The algorithm was able to identify the individual as having a case of sleep apnea effectively.
- iv. An individual's obstructed sleep apnea may also be identified by the method. After reviewing the findings, it is abundantly evident that the individual whose age is 50 or more is a patient who suffers from OSA.
- v. People will be able to identify sleep apnea at an earlier stage with the assistance of this form of monitoring. People will be able to learn about sleep apnea and the technique to identify it, and it will also help individuals get rid of all of their sleeping difficulties. As a result, this study may aid people.

Application of Invention

- a. The prevalence of sleeping disorders is far greater now than it was in the past. Sleep apnea is being brought on by an increase in the prevalence of conditions such as hypertension, difficulties associated to stress, and heart-related disorders.
- 10 b. The monitoring of sleep apnea and the detection of the precise length of sleep apnea will be made much easier and more sustainable by our method. This system is capable of functioning at a greater level while sustaining itself.
- c. Not only does it identify sleep apnea, but it may also notify the patient that they should discuss the data gathered from the system with their doctor. This not only
15 makes the lives of patients simpler, but it also identifies sleep apnea.
- d. And if we add more advanced technology to the mix, such high-level X-rays and other monitoring devices, we should be able to keep the project going in the years to come. The system may benefit from the addition of several more sensors in order to broaden its applicability.
- 20 e. The system could benefit from the addition of an LM35 temperature sensor. Even though those elements only have a tangential relationship with sleep apnea, this system might be improved with the addition of a DHT11 humidity sensor, which would make it more useful.

5 We Claim

The invention of Mobile Application based Sleep Apnoea Management System for Biomedical Exertion using Cloud Server comprises of:

1. The majority of studies measuring or monitoring sleep apnea employ data from ECGs in addition to other types of data. The majority were being monitored by medical professionals in a hospital setting.
2. The gadget will allow patients to achieve even greater output while maintaining the convenience of being at home and using it. Patients will be able to take preventative measures with the use of real-time data since it will provide quick updates on apnea indices.
3. This gadget is an extra advantage for people who are physically or mentally impaired, as well as older folks, since it provides notification data to the patient's concerned person.
4. This allows the concerned person to take care of any challenges that may arise at any moment. In the next step of this process, we will attempt to generate our own dataset using this real-time data.
5. The analysis of this dataset using several machine learning models in order to get a deeper understanding of the whole system as well as how our system can function more effectively.
6. It is a gift to live a life that is healthy and sound, free from any kind of sleeping condition, and technology can definitely guarantee that.

(Dr. ISHWARYA M. V)

(Dr. D. ADHIMUGA SIVASAKTHI)

(Dr. A. SATHIYARAJ)

(M. MAHARASI)

(Ms. B BALASAIGAYATHRI)

(Ms. NIVEDHA R)

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P. V. Sri Raseswar.
(Sri RAJA RAJESWARI P U)

(M) eny.
(P. MENAGA)

10 (Dr. R. RATHEESH)

s. P. Ramamoorthy.
(S RAMAMOORTHY)

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Abstract

A person's life and health depend on getting enough sleep, which helps to recharge both the body and the mind. The quality of sleep has a huge impact on everyone's lifestyle and helps fend against many ailments. There have been many people who have had problems falling asleep for a very long time. The term "sleep apnoea" is used to represent a number of sleep disorders that can affect persons who have a wide range of conditions. Because of the various physical changes that occur when we sleep, many people pass away in our sleep. A sleep monitoring system is therefore essential. The user will be able to assess different sleep indices, and any irregularities would be reported via a mobile application. Throughout their whole sleep, the system can monitor a person's ECG, breathing rate, skin reaction, and oximeter thanks to its array of sensors. This study is capable of collecting and broadcast the sleep indices on the mobile application simultaneously without disturbing the participant thanks to a IoT module. Anyone can use the system because of the way it has been designed. According to the findings, this study also considers individuals who aren't at danger of experiencing sleep problems. This study will assist readers in understanding sleep apnoea, recognising it, and taking the appropriate precautions.



CBR-NO => 54201
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[□□□ -II खण्ड 3 (ii)]

भारत का राजपत्र : आसाधारण

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FORM 9
THE PATENT ACT, 1970
(39 of 1970)
&
The Patents Rules, 2003
REQUEST FOR PUBLICATION
[See Section 11[2]; rule 24A]

1. Name, Address and Nationality of the Applicant

(a) NAME: Dr. ISHWARYA M. V, Dr. D. ADHIMUGA SIVASAKTHI,
Dr. A. SATHIYARAJ, M. MAHARASI, Ms. B BALASAIGAYATHRI,
Ms. NIVEDHA R, Sri RAJA RAJESWARI P U, P. MENAGA,
Dr. R. RATHEESH, S RAMAMOORTHY

2. To be Signed by the Applicant
Or his authorized registered
Patent Agent

hereby request for early publication of our
application for Patent No.....dated
..... under section 11A(2) of the Act.
Dated thisday of20.

3. Name of the Natural Person Has signed

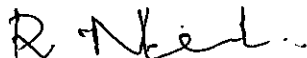
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(a) Signature:
(b) Name: Dr. A. SATHIYARAJ

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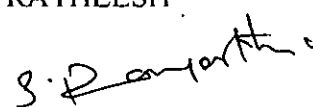
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(b) Name: Dr. R. RATHEESH

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To

The Controller of Patents,
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Note:- For Fee: See First Schedule



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डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

388949-001

तारीख / Date

23/06/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो AI BASED ROBOT FOR OBJECT

IDENTIFICATION से संबंधित है, का पंजीकरण, श्रेणी 14-02 में 1.Mrs. G. Akilandasowmya 2. Mrs. G. Nirmaladevi 3.Mrs. C. Geetha 4.Dr. M. Mayuranathan 5.Dr. K. Sundara Velrani 6.Dr. K. Pavendan के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-02 in respect of the application of such design to AI BASED ROBOT FOR OBJECT

IDENTIFICATION in the name of 1.Mrs. G. Akilandasowmya 2. Mrs. G. Nirmaladevi 3.Mrs. C. Geetha 4.Dr. M. Mayuranathan 5.Dr. K. Sundara Velrani 6.Dr. K. Pavendan.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 26/10/2023
Date of Issueमहानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

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Government of India



Application Details

APPLICATION NUMBER	202341046985
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	12/07/2023
APPLICANT NAME	1 . Dr. NEELAMBARAM BOLLEDU 2 . Dr.Vibha Singh 3 . Dr. J. Amutha Monica 4 . Dr.P.Pon Meenakshi 5 . Dr. Neeru Rathore 6 . Mr. Vangeti Suryaprakash Reddy 7 . Dr. S. Jothi 8 . Dr. M. Ravichand 9 . Dr. Dhimen Jani 10 . Mr. G.Satyanarayana 11 . Dr. Harikumar Palliathadka
TITLE OF INVENTION	The Effects of Communication Skill Development on the Evolution of Human Society and Business
FIELD OF INVENTION	COMPUTER SCIENCE
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ADDITIONAL-EMAIL (As Per Record)	iprpattent2022@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	01/09/2023

Application Status

APPLICATION STATUS	Awaiting Request for Examination
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Application Details

APPLICATION NUMBER	202341063280
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	20/09/2023
APPLICANT NAME	1 . Dr. Prakash. A 2 . Dr. R. Saravana Selvakumar 3 . M. C. Priyadarshini 4 . Dr. S.Janneker Lawrence Daniel 5 . A. Sangeeth Kumar 6 . J. Sathish Kumar 7 . Dr.J.Saravanan 8 . A. Chrispin Antonieta Dhivya 9 . Dr. D.J.B. Esther Rajath 10 . Lamessa Oli Afeta
TITLE OF INVENTION	COMPOSING IN ENGLISH THROUGH DIGITAL MULTIMODAL
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	fetsi.vm@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	06/10/2023

(54) Title of the invention : TECHNOLOGICAL INNOVATIONS IN ELT: ENHANCING LANGUAGE ACQUISITION IN THE DIGITAL ERA

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(57) Abstract :
The proposed system, titled Technological Innovations in ELT: Enhancing Language Acquisition in the Digital Era, represents a paradigm shift in English Language Teaching (ELT). It leverages advanced technology to address the limitations of traditional language education methods. Through immersive virtual reality experiences, artificial intelligence-driven personalized learning paths, and adaptive algorithms, the system transforms language acquisition into an engaging and effective process. Data analytics empower educators with valuable insights, promoting data-driven instructional improvements. Additionally, the system fosters collaboration by connecting learners globally in virtual classrooms. Its adaptability to emerging technologies ensures its relevance in an ever-evolving digital landscape. Proficiency in English, facilitated by this innovation, unlocks global opportunities and bridges communication gaps. Ultimately, this invention reshapes language education, enriching the fabric of global communication and understanding Accompanied Drawing [FIGS. 1-2]

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/03/2023

(21) Application No.202341016392 A

(43) Publication Date : 17/03/2023

(54) Title of the invention : WOMEN IN THE NOVELS OF MANJU KAPUR

(51) International classification :A21D 133100, A61K 361850, C07K 144700, G06N 030400, G06N 030800
(86) International Application No :PCT//
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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Filing Date :NA

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(57) Abstract :

Manju Kapur's fiction is an apology for feminism. Her novels revolve around certain enigmatic issues in the society. As a committed novelist, she deals with such pressing issues in order to create awareness among the reading public that feminism as a cultural concept should be practiced everywhere. Feminism is a desirable necessity in the absence of which the society loses its equilibrium in the relationship between men and women. A woman need not be always a help-mate, but she should be a checkmate, if not always, at times so that she can make her home a better one by offering timely counselling to her husband. Kapur is not a liberal humanist to remain uncommitted in dealing with such embarrassing issues as monogamous heterosexuality, equality in every sphere of life, alternative sex, sexual gratification, extra-uterine child birth, women's intellectuality, marital hindrances, women's emancipation and women's empowerment.

No. of Pages : 10 No. of Claims : 8

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1. The first step in the process of creating a new product is to identify a market need. This can be done through market research, which involves gathering information about the target market and its needs. Once a market need has been identified, the next step is to develop a concept for a new product that addresses this need. This concept should be based on the market research and should be designed to meet the needs of the target market. The concept should also be feasible, meaning that it can be developed and marketed within the company's resources. Once a concept has been developed, the next step is to create a prototype of the product. This prototype should be used to test the concept and to gather feedback from potential customers. Finally, once the concept has been tested and feedback has been gathered, the next step is to develop a business plan for the new product. This plan should outline the costs of development and marketing, as well as the expected sales and profits. Once a business plan has been developed, the company can then proceed with the development and marketing of the new product.

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Journal of Internal Medicine 247: 395–402

154

15. *Journal of the American Medical Association*, 277, 1996, 1211-1212.

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1977. *Journal of the American Statistical Association*, 72: 45-50.

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Patent Search

Invention Title	IOT BASED SMART BABY CRADLE SYSTEM WITH AUTOMATED STEREO SYSTEM
Publication Number	20/2024
Publication Date	17/05/2024
Publication Type	INA
Application Number	202441037466
Application Filing Date	13/05/2024
Priority Number	
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Field Of Invention	MECHANICAL ENGINEERING
Classification (IPC)	A47D0009020000, A61B0005000000, A47D0009000000, B62B0009220000, A47D0015000000

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Abstract:

IOT BASED SMART BABY CRADLE SYSTEM WITH AUTOMATED STEREO SYSTEM. Smart baby cradle system is an innovative IOT based project that aims to provide a more efficient way to take care of infants. This system utilizes various IOT components, such as MEMS sensor, Moisture sensor, MIC sensor, DHT II sensor, servo motor and Arduino UNO microcontroller, to monitor and control the infant's environment. For example, it can scan the baby's temperature, humidity, movements, bed wetting, crying and alert the or caretakers through a remote server using an ESP8266 wifi module in case of any abnormalities. The automated swing system will take care of the rocking motion of the and the automated music system can provide soothing sounds and voice recordings to help the baby fall asleep. Working parents cannot always take care of their babies. Smart based baby monitoring and automated swing and music system which can monitor the baby's condition in real time, has been proposed to solve these problems.

Complete Specification

4. DESCRIPTION

BACKGROUND OF THE INVENTION

Modern baby cradle systems often integrate various technologies to provide convenience, safety, and comfort for both babies and parents. Some of the present technologies involved in baby cradle systems include:

Motorized Rocking Mechanisms: Many baby cradles now come with motorized rocking mechanisms that mimic the soothing motion of being rocked in a caregiver's arms. These can be powered by batteries or electricity.

Sensors and Monitoring Systems: Some advanced baby cradle systems include sensors to monitor the baby's movements, temperature, and even heart rate. These sensors can provide alerts to parents if any abnormal activity is detected.

Mobile Apps and Connectivity: Several baby cradle systems offer integration with mobile apps, allowing parents to control features such as rocking speed, music, and vibration remotely. Some apps also provide data tracking and analysis features.

Safety Features: Safety is a paramount concern in baby products. Many baby cradles now

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School of Science and Humanities

Department of Physics

Academic Year – 2023– 2024

3.4.3 Number of Patents published/awarded – 2023- 2024

Sl. No.	Name of the Patenter	Patent Number	Title of the patent	Year of Award of patent
1	Dr. E. S. Sowbakkiyavathy	404064-001	Sea Water Desalination Apparatus using Solar Energy	2024
2	Dr. K. Vijai Anand	202441029097	Flexible copper tape functionalized with silver nanoarrays as a low-cost sensor for the detection of pollutants in wastewater	2024
3	Dr. Helen Merina Albert	397656-001	IOT based wearable health monitoring device	2023
4	Dr. Twisha Sain	405306-001	lot based solar empowered agricultural robot	2024
5	Dr. D. Kanimozhi	202441052613 A	Implementation of distributed renewable energy systems through machine learning by newton raphson method	2024
6	Dr. C. Rameshkumar	202341042489 A	Harnessing AI and Data Mining for a Robust E-commerce Fraud Detection Model	2023

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 डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. 404064-001

তারিখ / Date: 08/07/2024

পারস্পরিকতা তারিখ / Reciprocity Date*: ০৮ জুলাই ২০২৪

देश / Country: भारत सरकार, बौद्धिक संपदा कार्यालय, भारत सरकार, Intellectual Property Office, Government of India, बौद्धिक संपदा कार्यालय : ज्ञान प्रसार, बौद्धिक संपदा एफएल, भारत सरकार, (बौद्धिक संपदा कार्यालय, ज्ञान प्रसार, एफएल)

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *SEA WATER DESALINATION APPARATUS*

आक. USING SOLAR ENERGY से संबंधित है, का पंजीकरण, श्रेणी 23-01 में 1.Dr. Sivakumar Karthikeyan 2. Dr. Kiran Kumar M 3. Dr. Chinnthayansaidu Budam 4. Dr. Sudhakar

Dixit 5.Dr.E.S.Sowbakkiyavathi 6.Dr N Nagabhooshanam के नाम में उपर्युक्त संख्या और तारीख में

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Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-01 in respect of the application of such

design to SEA WATER DESALINATION APPARATUS USING SOLAR ENERGY in the name of 1.Dr. Sivakumar Karthikeyan 2. Dr Kiran Kumar M. 3.Dr. Chinthayyanaidu

Rudram 4.Dr. Sudhaker Dixit 5.Dr.E.S.Sowbakkivyavathi 6.Dr N Nagabhooshanam.

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Government of India

Designs Rules, 2001.

0986380 2086383, बौद्धिक संपदा कार्यालय, भारत सरकार, नई दिल्ली-110002
0986380 2086383, بولڈیک سंपدا कार्यालय, भारत सरकार, नई दिल्ली-110002

जारी कर दी गयी: 15/03/2024

Date of Issue: २०/०८/२०२०
 भारत सरकार, औद्योगिक संपदा कार्यालय, भारत सरकार, Intellectual Property Office, Government of India, Patents, Designs and Trade Marks Division, New Delhi
 भारत सरकार, औद्योगिक संपदा कार्यालय, भारत सरकार, Intellectual Property Office, Government of India, Patents, Designs and Trade Marks Division, New Delhi

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Ministry of Commerce & Industry,
Government of India



Application Details

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APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	10/04/2024
APPLICANT NAME	1 . Mohamed Shameer P 2 . K. Vijai Anand 3 . Soumya Columbus 4 . K.Govindaraju
TITLE OF INVENTION	FLEXIBLE COPPER TAPE FUNCTIONALIZED WITH SILVER NANOARRAYS AS A LOW-COST SENSOR FOR THE DETECTION OF POLLUTANTS IN WASTE WATER
FIELD OF INVENTION	PHYSICS
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	anandkvijai78@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	10/04/2024
PUBLICATION DATE (U/S 11A)	19/04/2024

Application Status

APPLICATION STATUS

Application Awaiting Examination

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(51) International classification	:H02J0003380000, G06N0020000000, G06Q0050060000, H02J0003320000, H02J0003060000	(71)Name of Applicant : 1)G.SRINIVASAN Address of Applicant :Professor & HoD , Department of EEE, MYJ College of Engineering, Bengaluru, Karnataka-560067. ----- 2)S.Prathap 3)D.Kanimozhi 4)M.K. NAGARAJAN 5)Shanmuga Kani J 6)Indu Sailaja K A 7)N.R.Anand 8)John De Britto C Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)G.SRINIVASAN Address of Applicant :Professor & HoD , Department of EEE, MYJ College of Engineering, Bengaluru, Karnataka-560067. ----- 2)S.Prathap Address of Applicant :Assistant Professor (Gr-I), Department of Mathematics , Panimalar Engineering College,Chennai, Tamil Nadu-600123. ----- 3)D.Kanimozhi Address of Applicant :Assistant Professor-Physics ,Sathyabama Institute of Science and Technology, Chennai- 600 119, Tamilnadu, India. ----- 4)M.K. NAGARAJAN Address of Applicant :Assistant Professor-CSE, Kalasalingam Academy of Research and Education, Krishnankoil- 626126, Tamilnadu, India. ----- 5)Shanmuga Kani J Address of Applicant :Research Scholar-Electrical Engineering, Anna University, Chennai- 600025, Tamilnadu, India. ----- 6)Indu Sailaja K A Address of Applicant :Assistant Professor-EEE, Easwari Engineering College, Chennai- 600089, Tamilnadu, India. ----- 7)N.R.Anand Address of Applicant :Assistant Professor -EEE, Anand Institute of Higher Technology, Chengalpet-603 103, Tamilnadu, India. ----- 8)John De Britto C Address of Applicant :Assistant Professor -EEE, Saveetha Engineering College, Saveetha Nagar, Thandalam, Chennai- 602 105, Tamilnadu, India. ----- ---
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Filing Date	:NA	

(57) Abstract :

The current work would like to explore the potentials of applying the NewtonRaphson method, which is a very well-established numerical technique within a machine learning framework in implementing distributed renewable energy systems. Traditionally, a nonlinear equation uses the Newton-Raphson method for solving. In this paper, it is proposed to investigate its applicability in: It could be used for the iterative solution of power flow equations in a distributed renewable energy system and therefore allow the possibility for real-time optimization of energy generation, storage, and distribution based on time-varying renewable sources with fluctuating demand. Integration with machine learning models: Such technique could be combined with machine learning models for forecasting and control. In that way, both methods can complement each other to find a more accurate solution to distributed energy systems. It discusses exploiting the Newton- Raphson method within a machine learning framework to help overcome the limitations of prevalent techniques in distributed renewable energy management, particularly pertaining to real-time optimization issues and grid integration challenges. The abstract simply tells that there is ample scope for exploration in this approach; further research would actually be required to do so.

No. of Pages : 9 No. of Claims : 4



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

[DEEMED TO BE UNIVERSITY]

Accredited "A++" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341042489 A

(19) INDIA

(22) Date of filing of Application :24/06/2023

(43) Publication Date : 01/09/2023

(54) Title of the invention : Harnessing AI and Data Mining for a Robust E-commerce Fraud Detection Model

(51) International classification :G06Q0020400000, G06N0020000000, G06Q0030060000, G06Q0030000000, G06N0020200000 (86) International Application No :PCT// Filing Date :01/01/1900 (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Shanker Chandre Address of Applicant :Assistant Professor, Department of Computer Science & Artificial Intelligence, SR University, Warangal ----- 2)Dr.M.Rajyalaxmi 3)Dr.Kafil 4)T. Guru Priya 5)Dr. C. Rameshkumar 6)Dhinesh.J 7)Dr.Gokulakrishnan S 8)Maria Sahaya Diran D Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Shanker Chandre Address of Applicant :Assistant Professor, Department of Computer Science & Artificial Intelligence, SR University, Warangal ----- 2)Dr.M.Rajyalaxmi Address of Applicant :Assistant Professor / MBA, School of Business, S R University, Warangal ----- 3)Dr.Kafil Address of Applicant :Assistant Professor / MBA, School of Business, S R University, Warangal ----- 4)T. Guru Priya Address of Applicant :Assistant Professor / ECE, Periyar Maniammai Institute of Science and Technology, PMIST, Vallam, Thanjavur ----- 5)Dr. C. Rameshkumar Address of Applicant :Associate Professor / Physics, Sathyabama Institute of Science & Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai ----- 6)Dhinesh.J Address of Applicant :Teacher, Department of Commerce, Servite CBSE School, Tuticorin ----- 7)Dr.Gokulakrishnan S Address of Applicant :Assistant Professor, School of Computer Science and Engineering and Information Science, Presidency University, Bangalore ----- 8)Maria Sahaya Diran D Address of Applicant :Research Scholar, Department of Commerce, St. Mary's College Autonomous, Tuticorin -----
---	--

(57) Abstract :

The proposed invention presents a computer-implemented method for e-commerce fraud detection by leveraging data mining, machine learning, and artificial intelligence techniques. Transactional data from an e-commerce platform is analyzed in real-time, identifying patterns indicative of fraudulent activities. Machine learning algorithms classify transactions as legitimate or suspicious, continuously updating a fraud detection model. Real-time alerts are generated for potentially fraudulent transactions, enabling timely intervention. The model adapts to evolving fraud patterns through artificial intelligence algorithms, incorporating historical data for improved accuracy. Advanced anomaly detection techniques and integration with existing fraud prevention systems enhance overall fraud prevention capabilities. The invention offers statistical analysis and reports on detected fraudulent activities, facilitating further investigation and prevention measures.

No. of Pages : 16 No. of Claims : 10



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Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details

APPLICATION NUMBER	202441055239
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	19/07/2024
APPLICANT NAME	1 . Dr. SHAIK HARUN RASHEED 2 . Dr. Narapusetty Naidu 3 . Mrs. Marabathuni Jhansipriya Venkata 4 . Mrs. Shaik Meharaj 5 . Dr. Vakkalagadda Ravi Kumar 6 . Dr. Kondapuram Parameshwar 7 . Mr. Chindam Suresh 8 . Ms. Kothamasi Priyarini 9 . Ms. Vallavoju Sai Meghana 10 . Mr.Vijay Kumar
TITLE OF INVENTION	NANO SPHERES OF RELIEF: PIONEERING SUSTAINED-RELEASE LANSOPRAZOLE FOR EFFECTIVE GASTRIC CARE
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	shaikharunrasheed@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	26/07/2024

09/08/2024, 14:22

Intellectual Property India

Application Status

APPLICATION STATUS

Awaiting Request for Examination

View Documents

➡ Filed ➡ Published ➡ RQ Filed ➡ Under Examination

➡ Disposed

In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in



Controller General of Patents, Designs and Trademarks
Department of Industrial Policy and Promotion
Ministry of Commerce and Industry

Design Application Details

Application Number:

420397-001

Cbr Number:

210529

Cbr Date:

18/06/2024 12:12:44

Applicant Name:

- | | | |
|---------------------------------|-----------------------------|---------------------------|
| 1. Mr. Kokkula Pavan Kumar | 2. Mr. Mohit Tiwari | 3. Dr. Anirban Neogi |
| 4. Mr. Mukesh Garg | 5. Dr. Garlapati Usha Kiran | 6. Dr. Nidhi Bansal |
| 7. Mr. Dhruv Kishor Vishwakarma | 8. Mr. Achal Kumar | 9. Dr. Manoj Kumar Katual |
| 10. Mrs. Nithyakalyani. K | 11. Dr. Harini. R | 12. Miss. Nandhini. M |

Design Application Status

Application Status:

Application Under Process(wating for Technical Examination)

[Back \(/DesignApplicationStatus/\)](#)

Disclaimer: Application status is available for the application filed on or after 1st April 2009 with application no 222230. The information under " Design Application Status" is dynamically retrieved and is under testing, therefore the information retrieved by this system is not valid for any legal proceedings under the Design Act 2000. In case of any discrepancy you may contact the appropriate Patent Office or send your comments to following email IDs:

Design Office, Kolkata : controllerdesign.ipa@nic.in
Controller General of Patents, Designs and Trademarks

Design number

6367024

Status

Registered

Registration date

19 May 2024

Renewal date

19 May 2029

Overview

Application date

19 May 2024

Grant date

29 July 2024

Publication date

30 July 2024

Indication of Product

ML BASED AUTOMATIC SANITIZER DISPENSER

Classification

Class	23 - FLUID DISTRIBUTION EQUIPMENT, SANITARY, HEATING, VENTILATION AND AIR CONDITIONING EQUIPMENT, SOLID FUEL
Sub class	08 - OTHER SANITARY EQUIPMENT AND ACCESSORIES, NOT INCLUDED IN OTHER CLASSES OR SUBCLASSES

Illustrations

Disclaimer

No claim is made for the colour shown

Designs



Names and addresses

Contact (address for service)

Vats IPR Services
13-15 TRAFALGAR ROAD, BLACKPOOL, FY1 6AW

Owners

Name	Address
Dr. Shubhangi Digamber Chikte	Professor, Department of CSE, VTU CPGS, Kalaburagi - 585105
Dr. Mohammad Shahid	Associate Professor & Head, Department of CSE (AIML), School of Computer Science in EmergingTechnologies, Noida Institute of Engineering and Technology
Mr.Prabakar Rajasekaran	Managing Partner, Rapid Technology and Infosolution, Puducherry
Dr.Shaik Sagar Imambi	Professor, Koneru Lakshmaiah Education and Foundation, Vaddeswaram, Guntur Dt.
Mr.Voleti Vijaya Kumar	Assistant Professor, School of Pharmacy, Sathyabama Institute of Science and Technology, OMR Road, Chennai, Tamil Nadu, 600119
Ms. Nandhini Nandhini	Assistant Professor, School of Pharmacy, Sathyabama Institute of Science and Technology

History

No history is available for this design



ORIGINAL

क्रम सं/ Serial No.: 139790



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

373212-001

तारीख / Date

28/10/2022

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **MOBILE PHASE MIXING TANKS FOR PHARMACEUTICAL PURPOSE** से संबंधित है, का पंजीकरण, श्रेणी 24-02 में 1.Dr. A. R. Vijayakumar 2. G. Sundararajan 3.Dr. T. Pugazhenthnan 4.Dr.N.Delhiraj के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 24-02 in respect of the application of such design to **MOBILE PHASE MIXING TANKS FOR PHARMACEUTICAL PURPOSE** in the name of 1.Dr. A. R. Vijayakumar 2. G. Sundararajan 3.Dr. T. Pugazhenthnan 4.Dr.N.Delhiraj.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 27/06/2023
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

Urkunde

über die Eintragung des
Gebrauchsmusters Nr. 20 2024 103 267

Bezeichnung:

Ein System zur Herstellung einer antihypertensiven Formulierung mit
verlängerter Freisetzung

IPC:

A61K 31/554

Inhaber/Inhaberin:

Aggarwal, Ashutosh, Dr., Hanumangarh Town, Rajasthan, IN
Delhiraj, Napa, Dr., Chennai, Tamil Nadu, IN
Gothandam, Sundararajan, Dr., Cuddalore, Tamil Nadu, IN
Gupta, Pankaj, Dr., Delhi, IN
Kataria, Mahesh Kumar, Dr., Sir Ganganagar, Rajasthan, IN
Sharma, Hanuman Prasad, Dr., Delhi, IN
Singh, Ajay Pal, Dr., New Delhi, IN
Thangaraju, Pugazhenthana, Dr., Raipur, Chhatisgarh, IN
Vijayakumar, Arumugam Ramamurthy, Dr., Chennai, Tamil Nadu, IN

Tag der Anmeldung:

18.06.2024

Tag der Eintragung:

09.07.2024

Die Präsidentin des Deutschen Patent- und Markenamts



Eva Schewior



München, 09.07.2024



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6288631

Grant date: 17 June 2023

Registration date: 08 June 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Renzon Daniel Cosme Pecho, Mrs. Meenakshi, Dr. Yedhunoori Ganesh

Kumar, Mr. Gaurav Saxena, Mr. Atul Pitambar Patil, Dr. Senthamaraikannan

Amudha, Dr. Nalini Kanta Sahoo, Mr. Bhavik Sharma, Dr. Meryelem Tania

Churampi Arellano, Dr. Moataz Dowaidar

in respect of the application of such design to:

Speed Continuous Motion Linear Vial Injectable Liquid Filling Machine for

Pharmaceutical Purpose

International Design Classification:

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 01 APPARATUS AND EQUIPMENT FOR DOCTORS, HOSPITALS
AND LABORATORIES

Version: 14-2023

Class: 15 MACHINES, NOT ELSEWHERE SPECIFIED

Subclass: 99 MISCELLANEOUS

Adam Williams

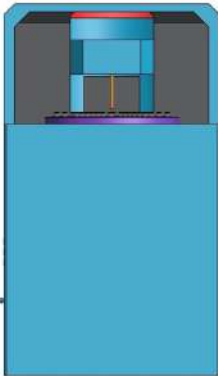
Comptroller-General of Patents, Designs and Trade Marks

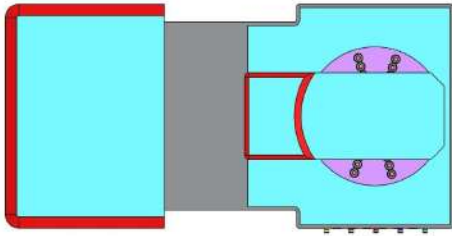
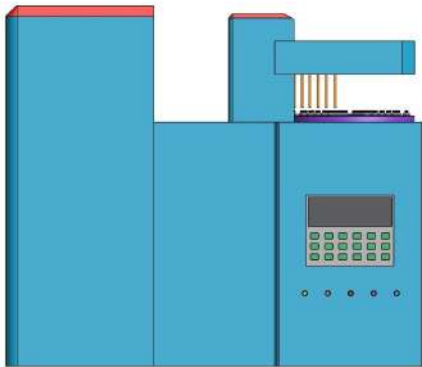
Intellectual Property Office

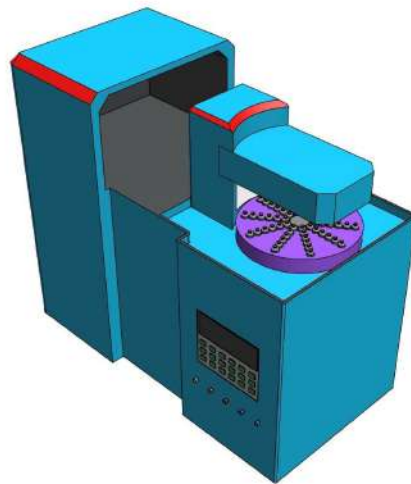
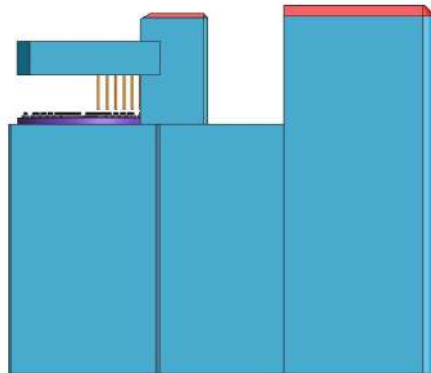
The attention of the Proprietor(s) is drawn to the important notes overleaf.



Representation of Designs







पेटेंट कार्यालय
शासकीय जर्नल

**OFFICIAL JOURNAL
OF
THE PATENT OFFICE**

निर्गमन सं. 35/2023
ISSUE NO. 35/2023

शुक्रवार
FRIDAY

दिनांक: 01/09/2023
DATE: 01/09/2023

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/07/2023

(21) Application No.202341045281 A

(43) Publication Date : 01/09/2023

(54) Title of the invention : COMPOSITION FOR REGULATING BLOOD SUGAR LEVELS WITH MOMORDICA CHARANTIA AND FENUGREEK SEED EXTRACTS

(51) International classification :A61K0036540000, A61K0036480000, A61K0036896200, A61K0008978900, A23L0033105000
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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3)Dr. S. Amudha
4)Dhananjay Aoudumbar Chavan
5)Dr. Manchineni Prasada Rao
6)Dr. Sagar Panu
7)Dr. Pritam Nagesh Dube
8)Prof. (Dr.) Ittagi Shanmukha
9)Dr. Ajit Kumar Yadav
10)Mrs. Priya Chaturvedi
11)Lunavat Payal Jain
12)Dr. Manchineni Prasada Rao
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
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6)Dr. Sagar Panu
Address of Applicant :Associate Professor, Department of Pharmacy Practice, Amity Institute of Pharmacy, Amity University, Gwalior, Madhya Pradesh - 474005, India Gwalior -----
7)Dr. Pritam Nagesh Dube
Address of Applicant :Matoshri College of Pharmacy, Eklahare, Nashik, Maharashtra - 422105, India Nashik -----
8)Prof. (Dr.) Ittagi Shanmukha
Address of Applicant :Professor and Vice Principal, Head Dept. of Pharmacology, S.C.S College of Pharmacy, Harapanahalli, Karnataka - 583131, India Harapanahalli -----
9)Dr. Ajit Kumar Yadav
Address of Applicant :Director, R k.institute of Pharmacy, Bareilly, Uttar Pradesh - 243503, India Bareilly -----
10)Mrs. Priya Chaturvedi
Address of Applicant :IIMT COLLEGE OF PHARMACY GREATER NOIDA, Uttar Pradesh - 201310, India NOIDA -----
11)Lunavat Payal Jain
Address of Applicant :Assistant professor in st Mary's college of Pharmacy, Dept of Pharmacognosy, St. Francis Street, Hyderabad, Telangana - 500025, India Hyderabad -----
12)Dr. Manchineni Prasada Rao
Address of Applicant :Principal Cum Professor, Medarametla Anjamma Mastanrao College Of Pharmacy, Kesanupalli, Narasaraopet, Srinivasa Nagar, Kesanapalli, Andhra Pradesh - 522601, India Kesanapalli -----

(57) Abstract :

The present invention discloses a composition for regulating blood sugar levels, comprising a synergistic blend of MomordicaCharantia extract, Fenugreek seed extract, and additional natural extracts. The composition offers a natural and holistic approach to blood sugar regulation, harnessing the potential benefits of these extracts to support glycemic control. MomordicaCharantia extract, derived from the fruits of the MomordicaCharantia plant, contains bioactive compounds such as charantin, polypeptide-p, and vicine. Fenugreek seed extract, obtained from Trigonellafoenum-graecum seeds, comprises soluble dietary fibers, saponins, and alkaloids. The composition further includes additional natural extracts, such as Cinnamomum cassia bark extract, Gymnemasylvestre leaf extract, or Allium sativum bulb extract, known for their potential in blood sugar regulation.

No. of Pages : 13 No. of Claims : 10



ORIGINAL

क्रम सं/ Serial No.: 162146



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

401668-001

तारीख / Date

08/12/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **SOLAR PYROLYZER MACHINE** से संबंधित है, का पंजीकरण, श्रेणी 15-99 में 1.Dr. A.Anderson 2. Dr Amudhavalli Victor के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-99 in respect of the application of such design to **SOLAR PYROLYZER MACHINE** in the name of 1.Dr. A.Anderson 2. Dr Amudhavalli Victor.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :

Date of Issue

28/03/2024



डिजाइन की पंजीकरण

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



The Patent Office, Government Of India

408547-001

23/02/2024

देश / Country

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

(<http://ipindia.nic.in/index.htm>)



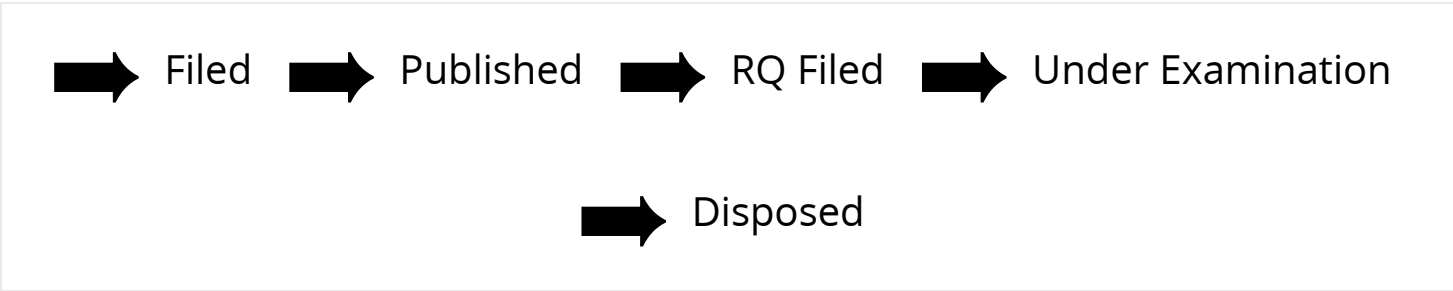
(<http://ipindia.nic.in/index.htm>)

Application Details

APPLICATION NUMBER	202341054362
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	13/08/2023
APPLICANT NAME	1 . Dr. M. Prashanthi Evangelin 2 . SD. Rehamatullah 3 . Madamshetti Sneha 4 . Vinjavarapu L. Anusha 5 . Dr. Joan Vijetha R. 6 . S. Monisha 7 . S. Kokila 8 . A. L. Harini 9 . Dr. Garlapati Poojitha 10 . T. Rajeev Kumar 11 . Sanam Jayasree 12 . Sadam Durga Sai Bargav 13 . K. S. N. V. Jaysurya
TITLE OF INVENTION	A SMART MENTAL HEALTH BASED INTEGRATED METHOD TO MANAGE CHRONIC DISEASES
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING
E-MAIL (As Per Record)	patents@allinnov.org
ADDITIONAL-EMAIL (As Per Record)	allinnovrnd@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	01/09/2023

Application Status	
APPLICATION STATUS	Awaiting Request for Examination

			View Documents
--	--	--	--------------------------------



In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6347576

Grant date: 26 February 2024

Registration date: 18 February 2024

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Joseph Sasi Rajan M, Kiranmayi Patel, Dr. D. Velumoni, Dr. Mahesh Kumar

Maharudrappa Meenkera, Dr. Nitin Kulshrestha, Dr. Joshuva Arockia Dhanraj

in respect of the application of such design to:

BIG DATA ANALYTICS PROCESSING SERVER EQUIPMENT FOR FINANCIAL
TRANSACTIONS

International Design Classification:

Version: 14-2023

Class: 14 RECORDING, TELECOMMUNICATION OR DATA PROCESSING
EQUIPMENT

Subclass: 02 DATA PROCESSING EQUIPMENT AS WELL AS PERIPHERAL
APPARATUS AND DEVICES

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks
Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.



Controller General of Patents, Designs & Trade
Marks
CP-2, Sector V, Salt Lake City, Kolkata-700091
Tel No. (091)(033) 23671945-46 Fax No. 033 23671988
E-mail: kolkata-patent@nic.in
Web Site: www.ipindia.gov.in



सत्यमेव जयते

G.A.R.6
[See Rule 22(1)]
RECEIPT



Date/Time 10/04/2024

To

User Code: harishvats

Dr. N. Venkateswaran,
Professor and Head, Department of Master of Business
Administration, Panimalar Engineering College, Chennai 600123.

User Name: Harish Sharma

CBR Detail:

Sr. No.	Ref. No./Application No.	App. Number	Amount Paid	C.B.R. No.	Form Name	Remarks
1	413216-001		1000	205992	FORM 1	Smart Content Recommendation Educational Device

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
D-0000076654	Online Bank Transfer	1004240045501	1000.00	1475001020000001

Total Amount : ₹ 1000

Amount in Words: Rupees One Thousand Only

Received from Harish Sharma the sum of ₹ 1000 on account of Payment of fee for above mentioned Application/Forms.

* This is a computer generated receipt, hence no signature required.

Print



सत्यमेव जयते



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

पेटेंट प्रमाण पत्र

Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

543099

आवेदन सं. / Application No.

201641039015

फाइल करने की तारीख / Date of Filing

16/02/2017

पेटेंटी / Patentee

DR.TR.KALAI LAKSHMI

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकरित **PREPAID CUSTOMER LOYALTY CARD FOR RETAILERS** नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख फरवरी 2017 के सोलहवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **PREPAID CUSTOMER LOYALTY CARD FOR RETAILERS** as disclosed in the above mentioned application for the term of 20 years from the 16th day of February 2017 in accordance with the provisions of the Patents Act, 1970.



इकांत की दंडित
पेटेंट नियंत्रक

अनुदान की तारीख : 26/06/2024
Date of Grant :

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, फरवरी 2019 के सोलहवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 16th day of February 2019 and on the same day in every year thereafter.



Controller General of Patents, Designs and Trademarks
Department of Industrial Policy and Promotion
Ministry of Commerce and Industry

Design Application Details

Application Number:

409724-001

Cbr Number:

203783

Cbr Date:

07/03/2024 18:49:20

Applicant Name:

1. Dr. KIRTI MAHAJAN 2. Dr. TAPASH RANJAN SAHA 3. Dr. MOUMITA SAHA
4. Ms. M JAYASEELY 5. Dr. MAHAMMAD IDRISH I. SANDHI
6. Prof. VINITA PIMPALE 7. Dr. RITU GUPTA 8. Ms. TWEENA PANDEY
9. Dr. KANNAN VELLINGIRI

Design Application Status

Application Status:

Examination Report has been Generated ,Case is Waiting for Examination Report Reply (FER generated on 15/04/2024)

[Back \(/DesignApplicationStatus/\)](#)

Disclaimer: Application status is available for the application filed on or after 1st April 2009 with application no 222230. The information under " Design Application Status" is dynamically retrieved and is under testing, therefore the information retrieved by this system is not valid for any legal proceedings under the Design Act 2000. In case of any discrepancy you may contact the appropriate Patent Office or send your comments to following email IDs:

Design Office, Kolkata : controllerdesign.ipo@nic.in

Controller General of Patents, Designs and Trademarks



ORIGINAL

क्रम सं/ Serial No.: 147089



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

392622-001

तारीख / Date

12/08/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **PROJECT TIMELINE TRACKER** से संबंधित है, का पंजीकरण, श्रेणी 14-02 में 1.Dr. Dinesh Gabhane 2. Dr. B. Bhavya 3.Dr. Bhola Khan 4.Dr. K. Santhanalaxmi 5.Dr. D. Saravanan के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-02 in respect of the application of such design to **PROJECT TIMELINE TRACKER** in the name of 1.Dr. Dinesh Gabhane 2. Dr. B. Bhavya 3.Dr. Bhola Khan 4.Dr. K. Santhanalaxmi 5.Dr. D. Saravanan.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 30/10/2023
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6320609

Grant date: 27 October 2023

Registration date: 20 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. MUTHUSAMY

SEENIVASAN, Dr. SANTHANALAXMI KARTHIKVEL, Dr. BHAVYA BHASURAN

, Dr. BLESSIE PATHMU RAJAKARAN

in respect of the application of such design to:

ROBOT PICKING AND PLACING DEVICE

International Design Classification:

Version: 14-2023

Class: 12 MEANS OF TRANSPORT OR HOISTING

Subclass: 05 ELEVATORS AND HOISTS FOR LOADING OR CONVEYING

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

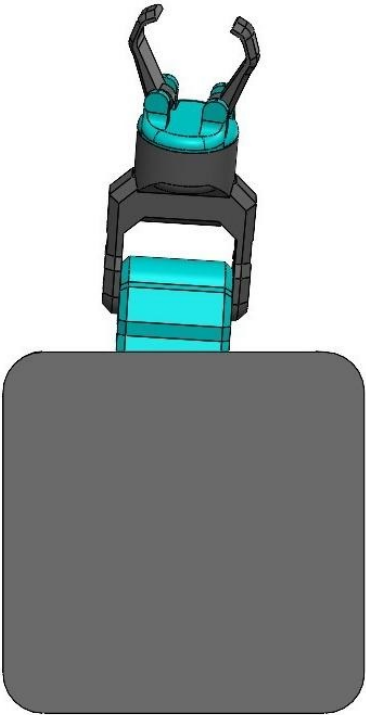
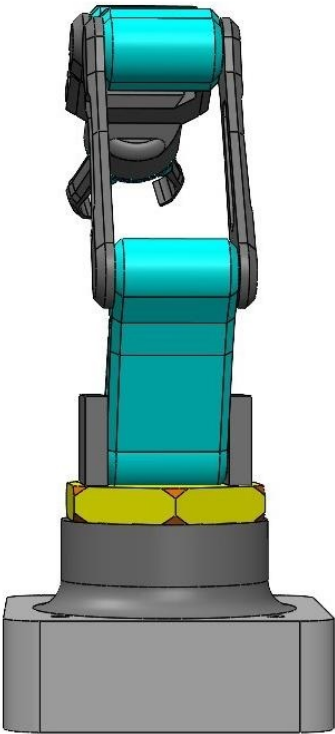
The attention of the Proprietor(s) is drawn to the important notes overleaf.

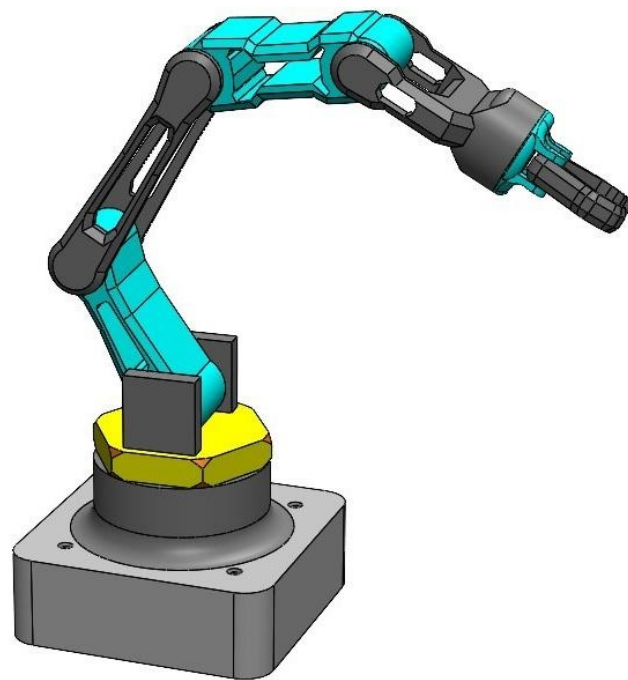
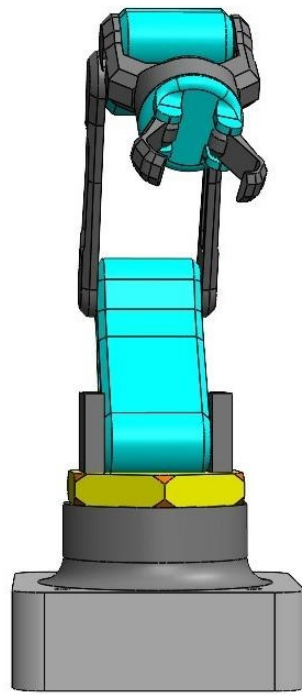


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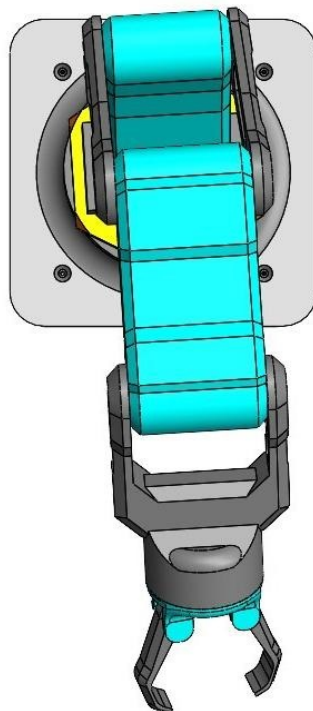
www.gov.uk/ipo

Representation of Designs











Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6320612

Grant date: 27 October 2023

Registration date: 20 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. MUTHUSAMY

SEENIVASAN, Dr. SANTHANALAXMI KARTHIKVEL, Dr. BHAVYA BHASURAN

, Dr. BLESSIE PATHMU RAJAKARAN

in respect of the application of such design to:

LUNG CANCER DETECTION DEVICE

International Design Classification:

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 01 APPARATUS AND EQUIPMENT FOR DOCTORS, HOSPITALS
AND LABORATORIES

Adam Williams

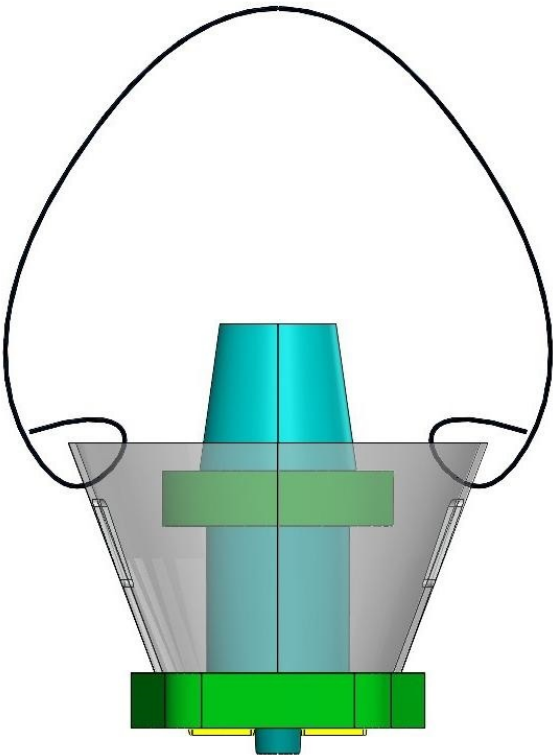
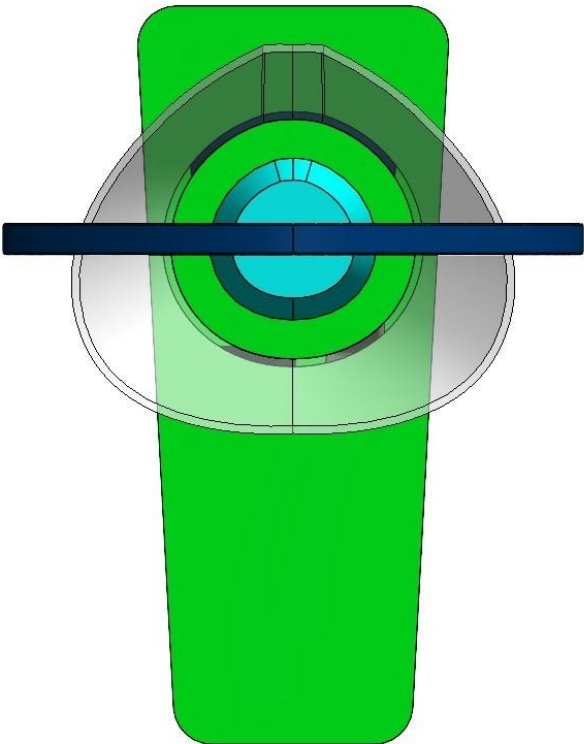
Comptroller-General of Patents, Designs and Trade Marks

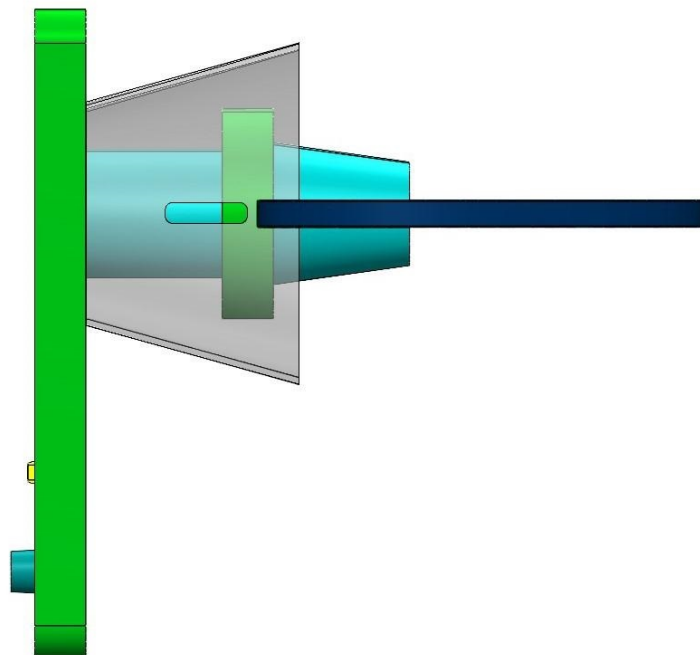
Intellectual Property Office

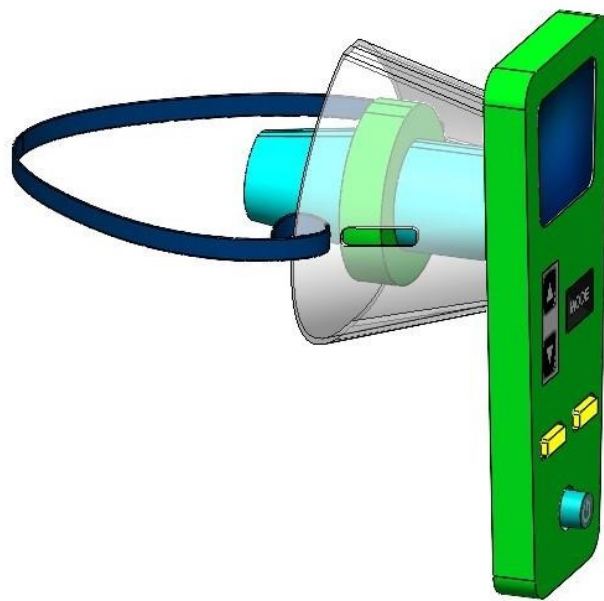
The attention of the Proprietor(s) is drawn to the important notes overleaf.

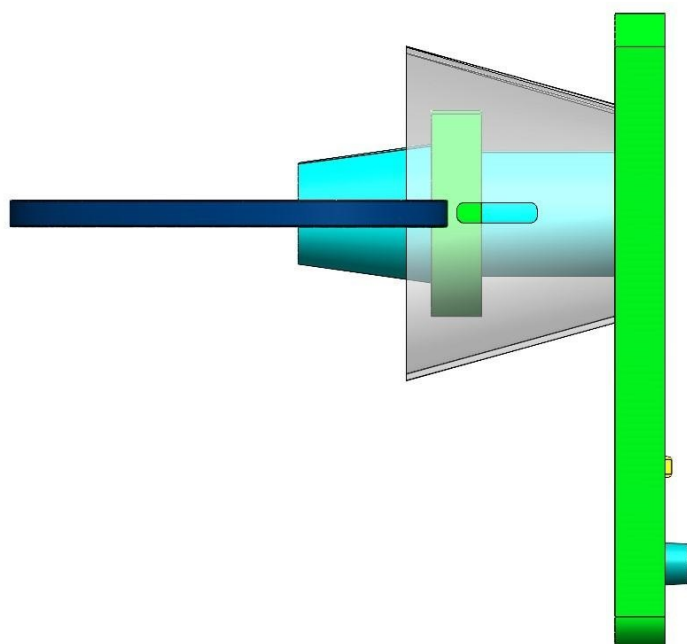
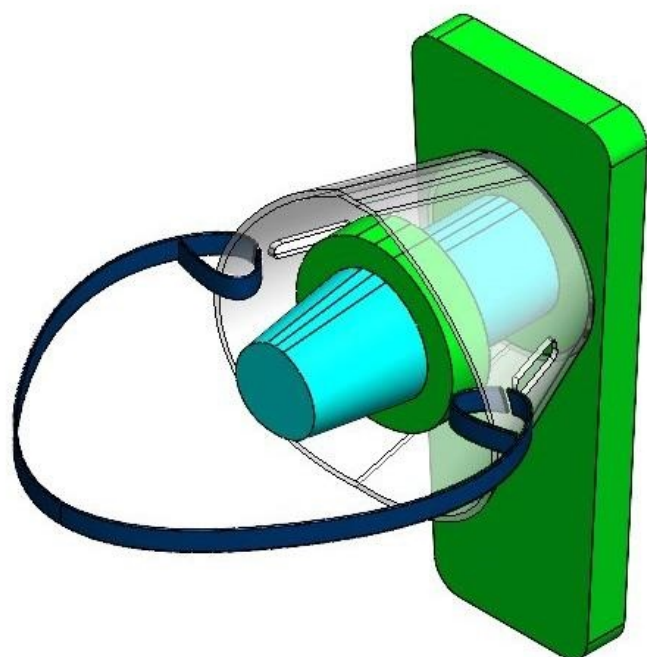


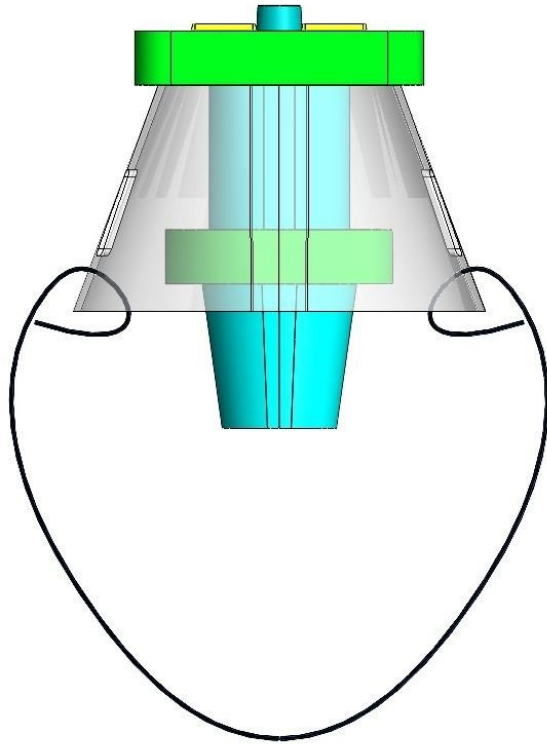
Representation of Designs











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Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6320608

Grant date: 27 October 2023

Registration date: 20 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. MUTHUSAMY

SEENIVASAN, Dr. SANTHANALAXMI KARTHIKVEL, Dr. BHAVYA BHASURAN

, Dr. BLESSIE PATHMU RAJAKARAN

in respect of the application of such design to:

SOLAR PANEL MOBILITY STAND

International Design Classification:

Version: 14-2023

Class: 12 MEANS OF TRANSPORT OR HOISTING

Subclass: 12 PERAMBULATORS, INVALID CHAIRS, STRETCHERS

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

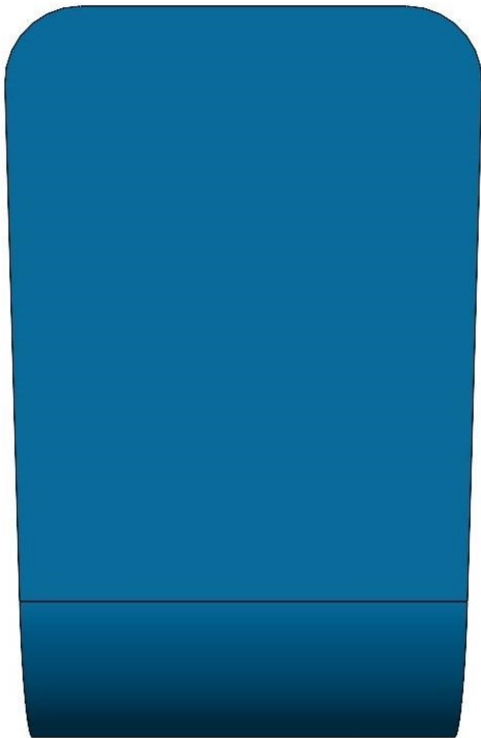
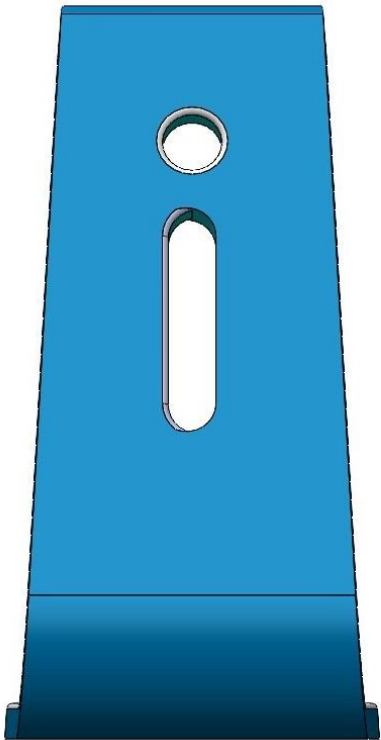
The attention of the Proprietor(s) is drawn to the important notes overleaf.

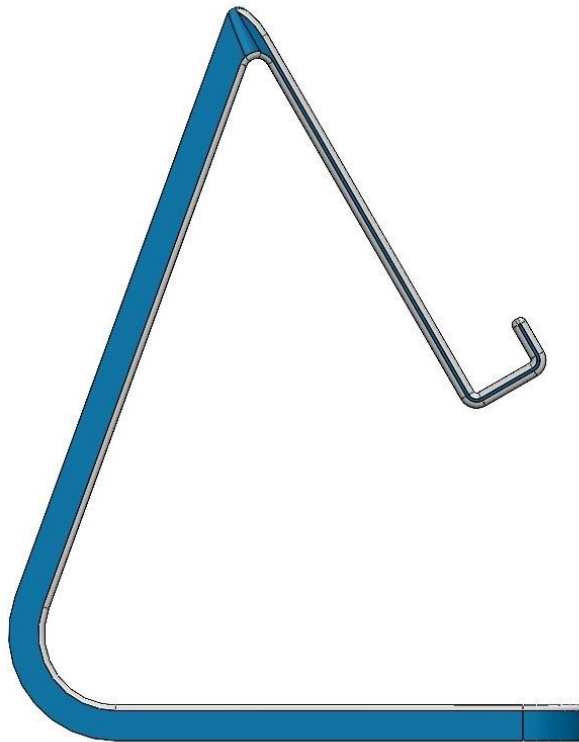
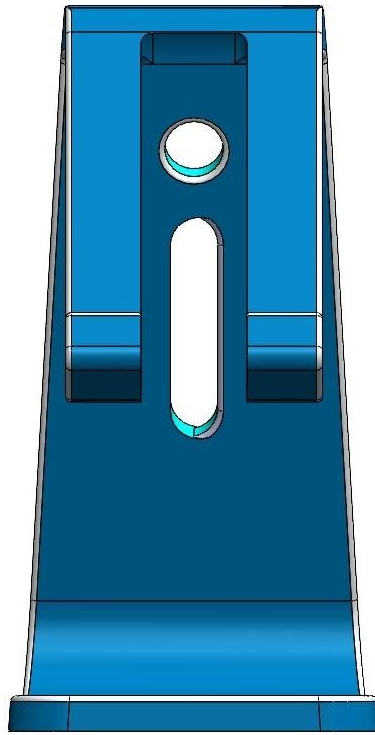


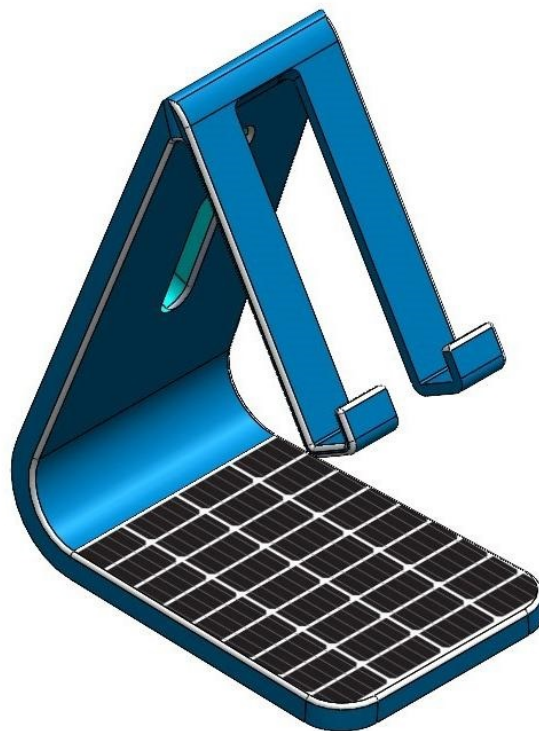
Intellectual Property Office is an operating name of the Patent Office

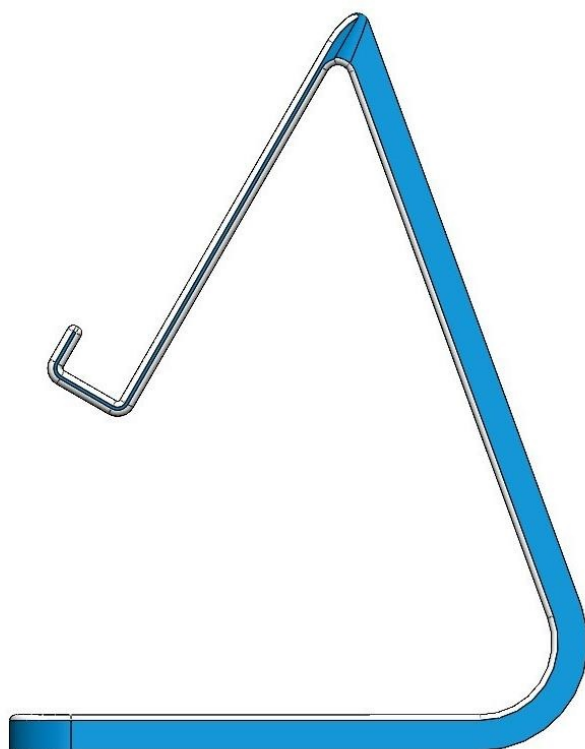
www.gov.uk/ipo

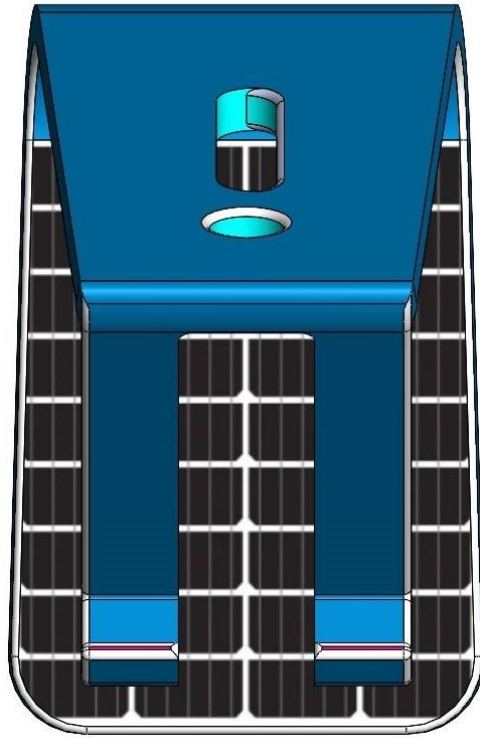
Representation of Designs











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Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6320610

Grant date: 27 October 2023

Registration date: 20 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. MUTHUSAMY

SEENIVASAN, Dr. SANTHANALAXMI KARTHIKVEL, Dr. BHAVYA BHASURAN

, Dr. BLESSIE PATHMU RAJAKARAN

in respect of the application of such design to:

FACE MASK DETECTING AND BODY TEMPERATURE MEASURING DEVICE

International Design Classification:

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 01 APPARATUS AND EQUIPMENT FOR DOCTORS, HOSPITALS
AND LABORATORIES

Adam Williams

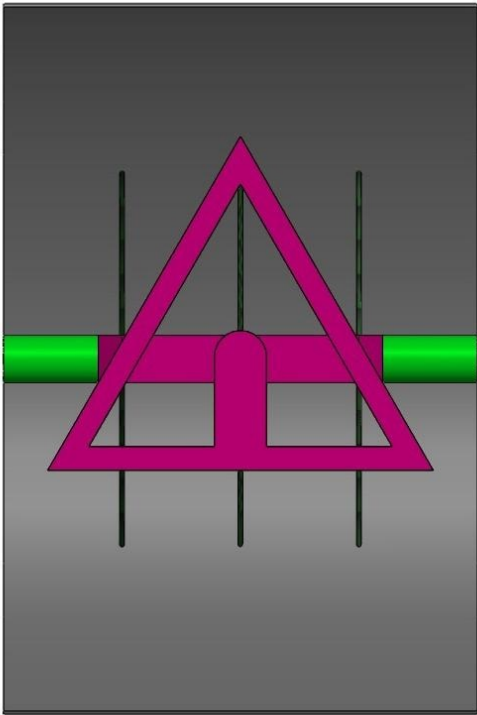
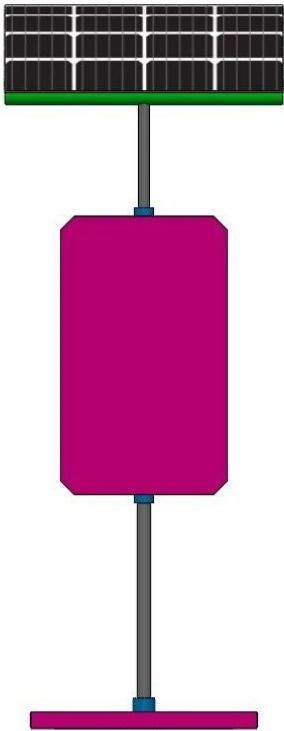
Comptroller-General of Patents, Designs and Trade Marks

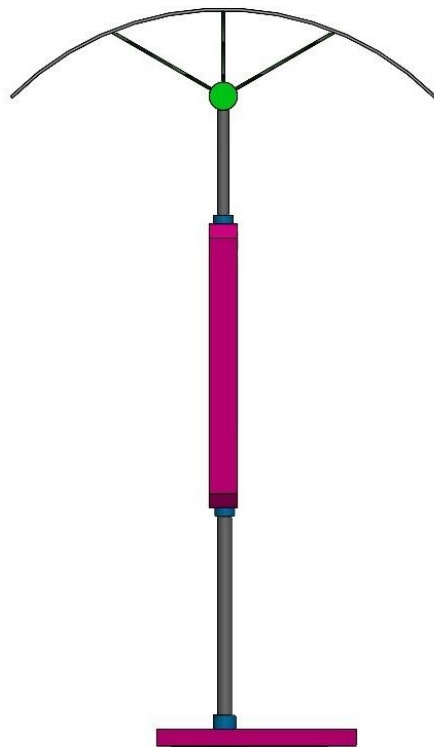
Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.

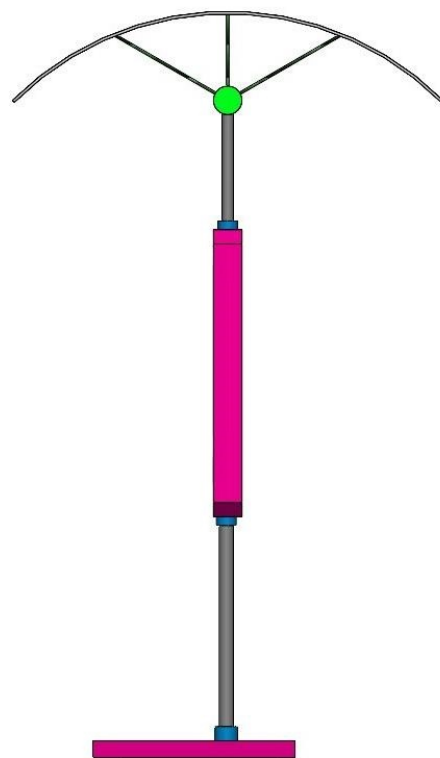
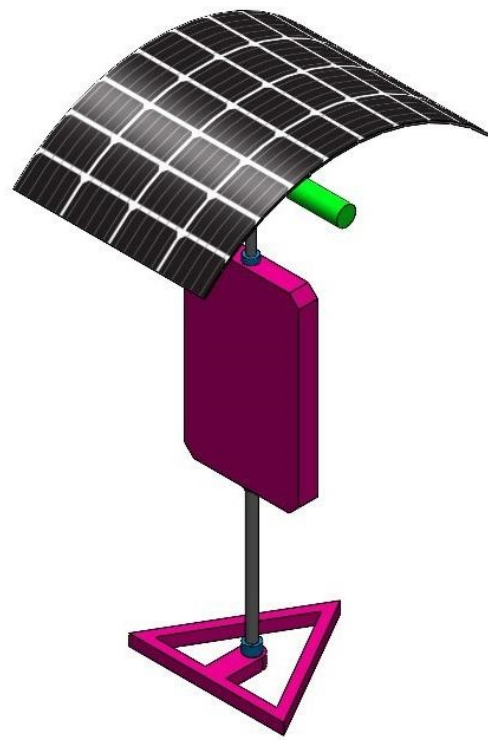


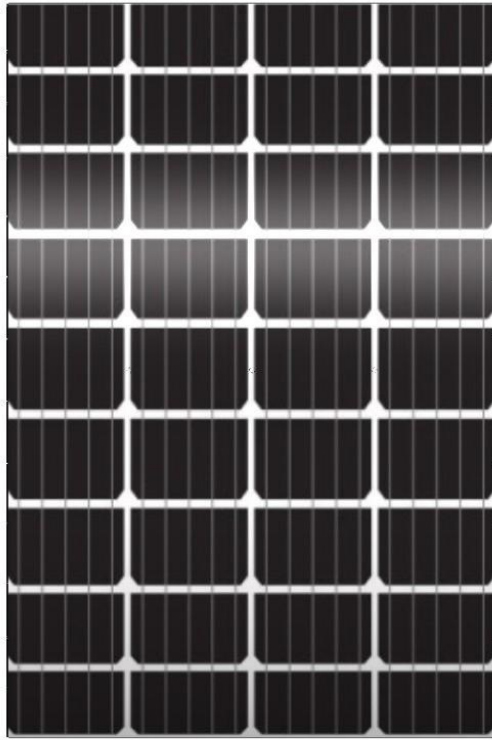
Representation of Designs











Intellectual Property Office is an operating name of the Patent Office

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Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6308564

Grant date: 15 September 2023

Registration date: 07 September 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Vivek Vithalrao Jawale, Dr. Bhavya Bhasuran, Dr. Santhanalaxmi Karthikvel,

Dr. MuthuRaman Kavitha, Dr. Sayeeda Jabeen Shariff, Dr. Sapna Jain

in respect of the application of such design to:

SYSTEM FOR RECYCLING PLASTIC

International Design Classification:

Version: 14-2023

Class: 15 MACHINES, NOT ELSEWHERE SPECIFIED

Subclass: 99 MISCELLANEOUS

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

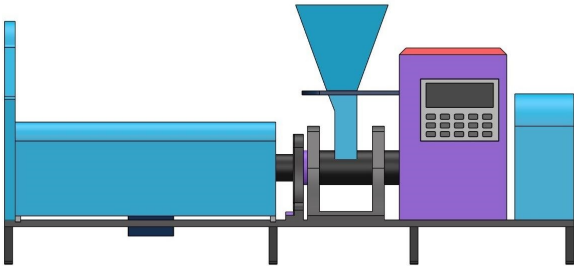
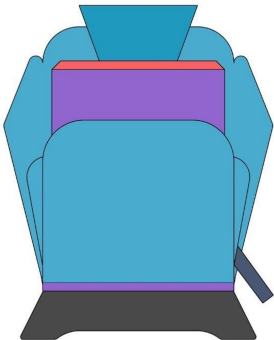
The attention of the Proprietor(s) is drawn to the important notes overleaf.

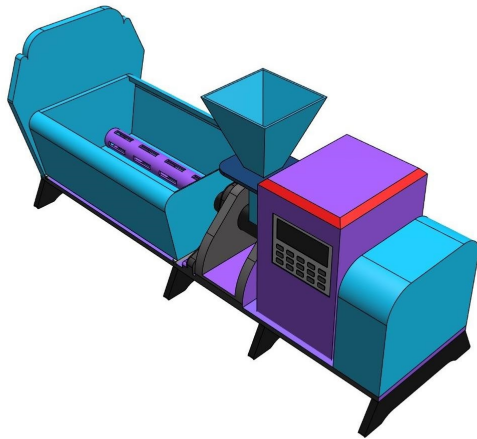
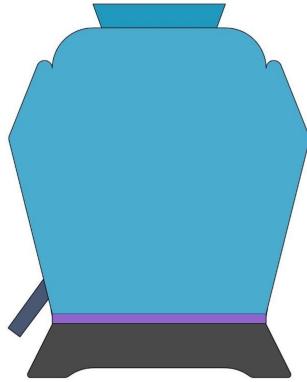


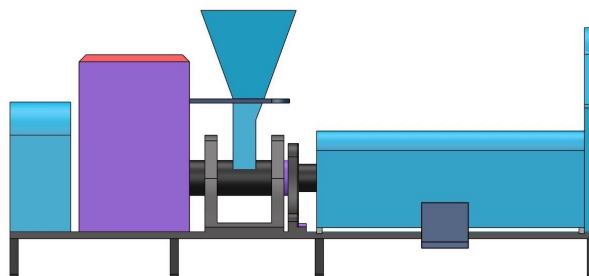
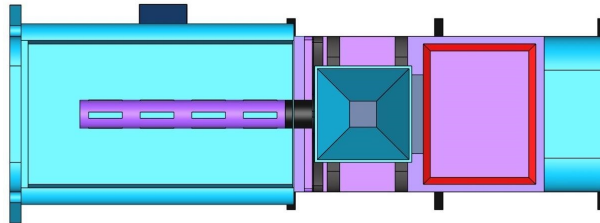
Intellectual Property Office is an operating name of the Patent Office

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Representation of Designs









Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6308464

Grant date: 15 September 2023

Registration date: 07 September 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. VANTHANA JEYASINGH,

Dr. RAJAKARAN BLESSIE PATHMU , Dr. ANDOORKALAM SUBRAMANIAN

PRINCY

in respect of the application of such design to:

FOOD WASTE AND RENEWABLE ENERGY MANAGEMENT SYSTEM

International Design Classification:

Version: 14-2023

Class: 15 MACHINES, NOT ELSEWHERE SPECIFIED

Subclass: 99 MISCELLANEOUS

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

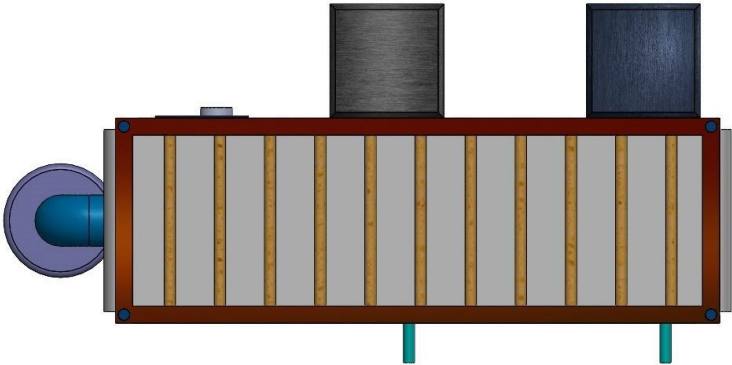
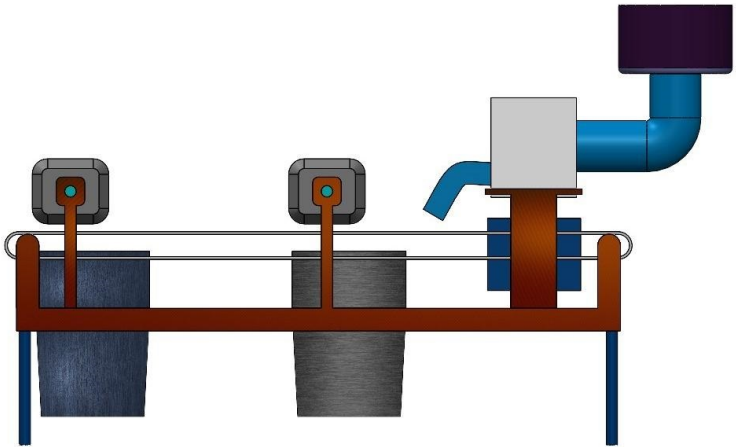
The attention of the Proprietor(s) is drawn to the important notes overleaf.

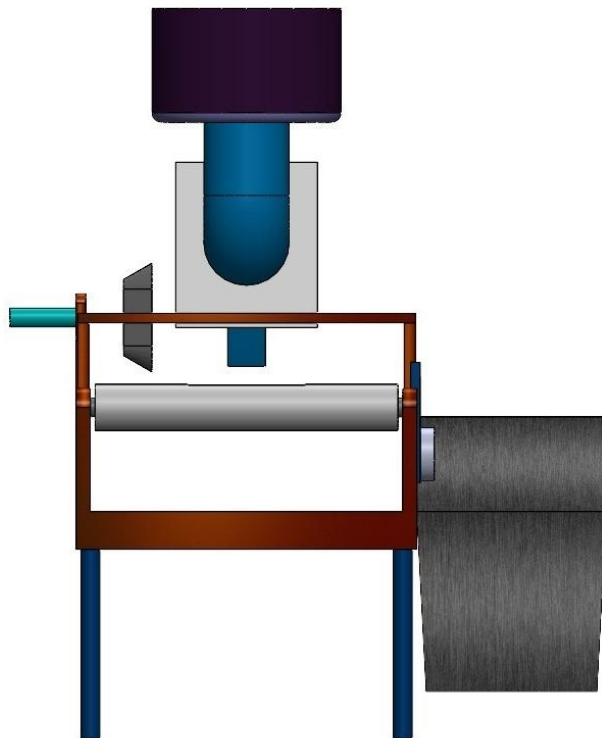
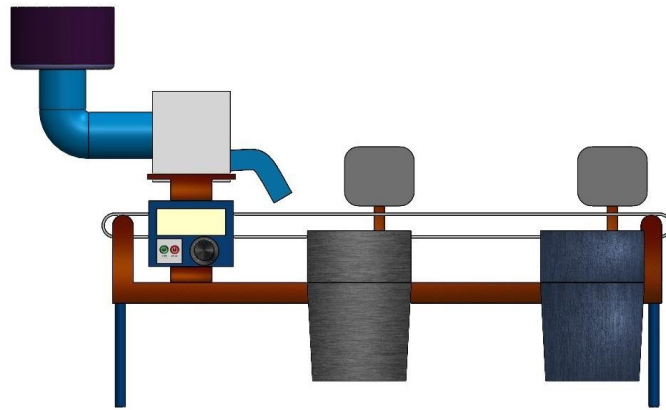


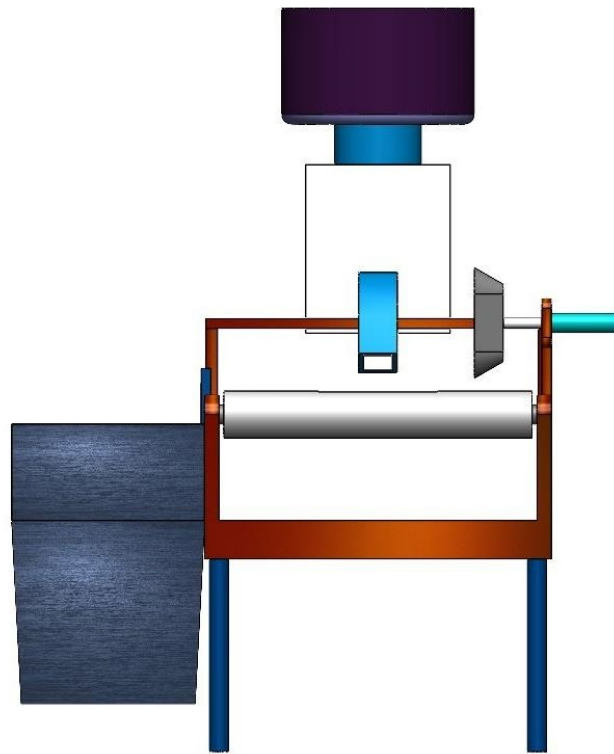
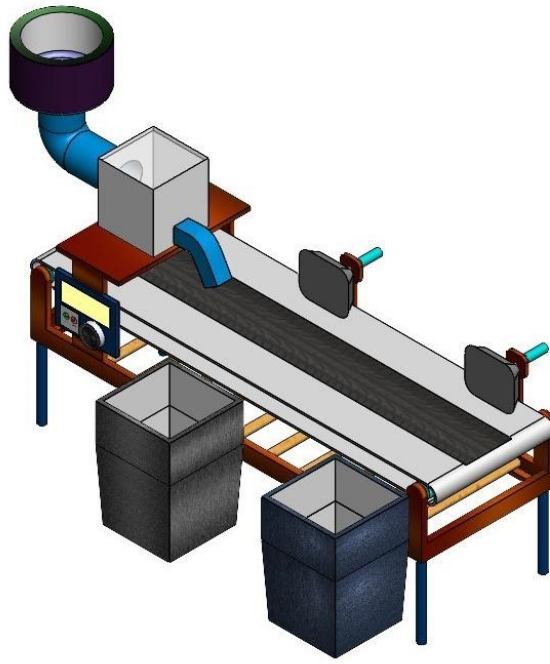
Intellectual Property Office is an operating name of the Patent Office

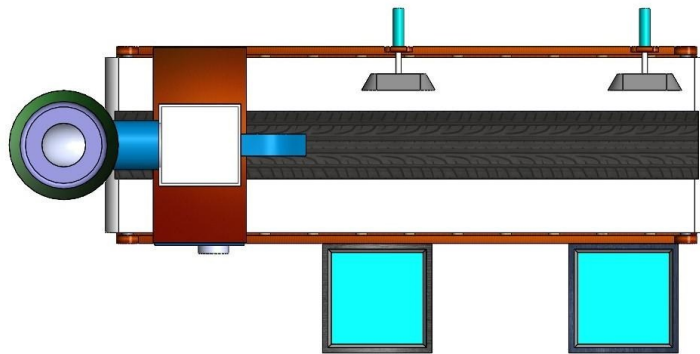
www.gov.uk/ipo

Representation of Designs









Intellectual Property Office is an operating name of the Patent Office

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Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6308466

Grant date: 15 September 2023

Registration date: 07 September 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. VANTHANA JEYASINGH,

Dr. RAJAKARAN BLESSIE PATHMU , Dr. ANDOORKALAM SUBRAMANIAN

PRINCY

in respect of the application of such design to:

MICROWAVE SENSOR BASED SOIL ANALYZER

International Design Classification:

Version: 14-2023

Class: 10 CLOCKS AND WATCHES AND OTHER MEASURING
INSTRUMENTS, CHECKING AND SIGNALLING INSTRUMENTS

Subclass: 05 INSTRUMENTS, APPARATUS AND DEVICES FOR CHECKING,
SECURITY OR TESTING

Adam Williams

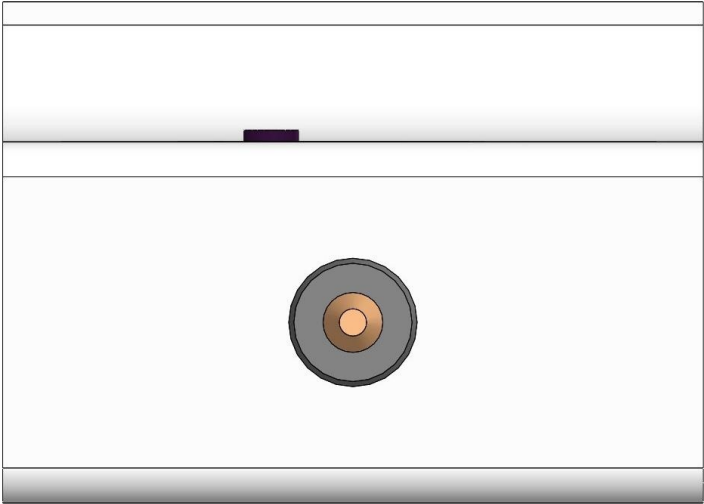
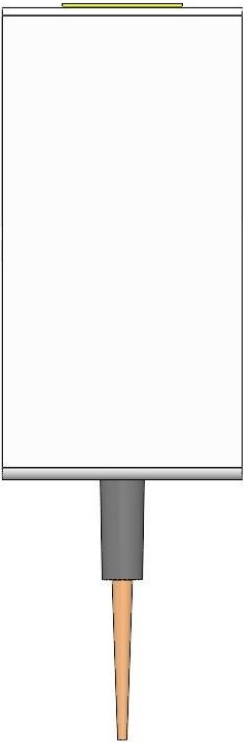
Comptroller-General of Patents, Designs and Trade Marks

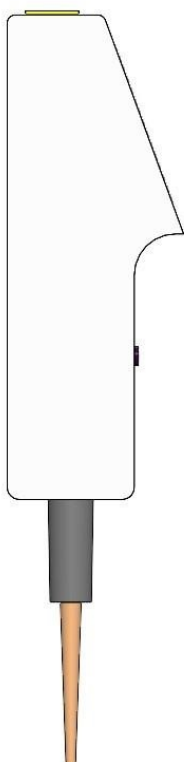
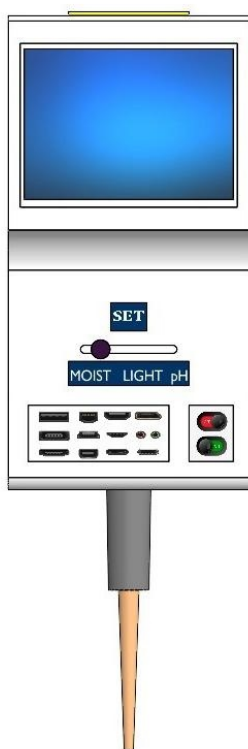
Intellectual Property Office

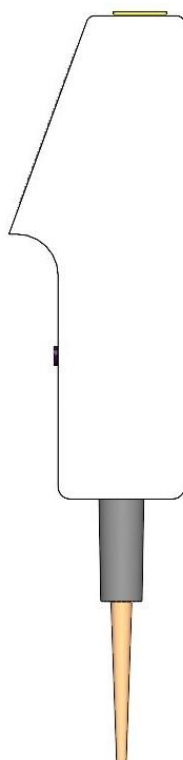
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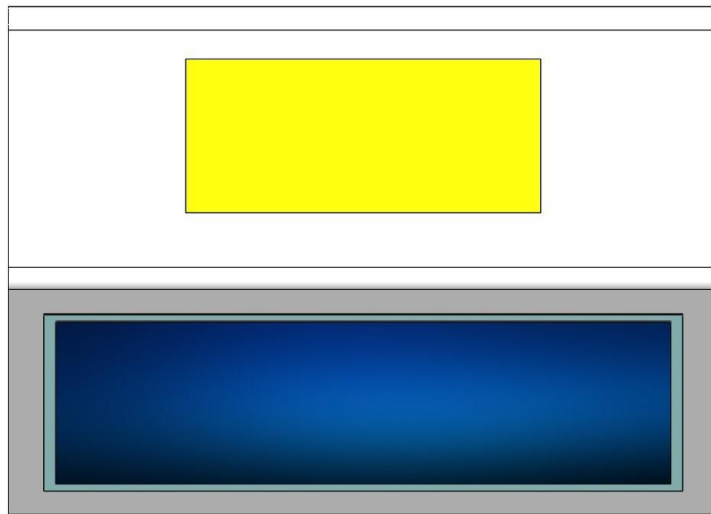


Representation of Designs









Intellectual Property Office is an operating name of the Patent Office

www.gov.uk/ipo



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6308465

Grant date: 15 September 2023

Registration date: 07 September 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. VANTHANA JEYASINGH,

Dr. RAJAKARAN BLESSIE PATHMU , Dr. ANDOORKALAM SUBRAMANIAN

PRINCY

in respect of the application of such design to:

FRUIT JUICE MACHINE

International Design Classification:

Version: 14-2023

Class: 31 MACHINES AND APPLIANCES FOR PREPARING FOOD OR DRINK,
NOT ELSEWHERE SPECIFIED

Subclass: 00 MACHINES AND APPLIANCES FOR PREPARING FOOD OR
DRINK, NOT ELSEWHERE SPECIFIED

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

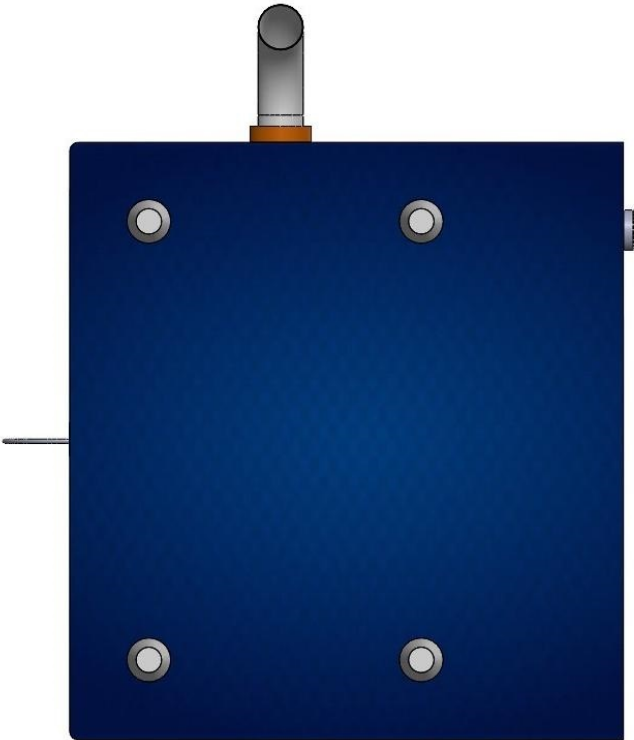
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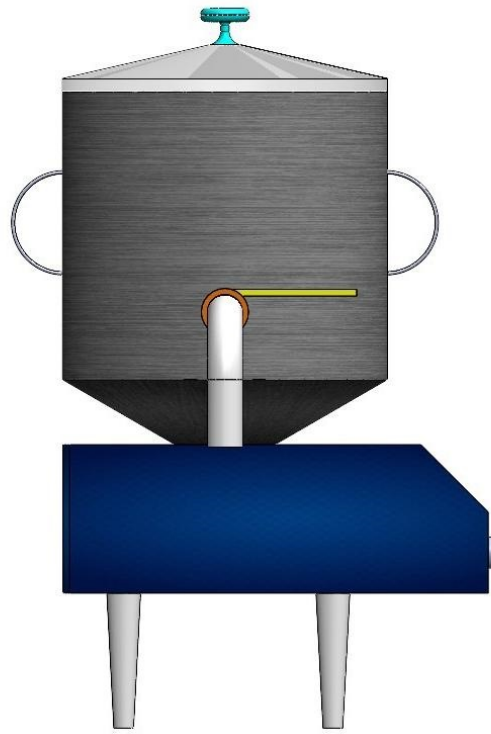


Intellectual Property Office is an operating name of the Patent Office

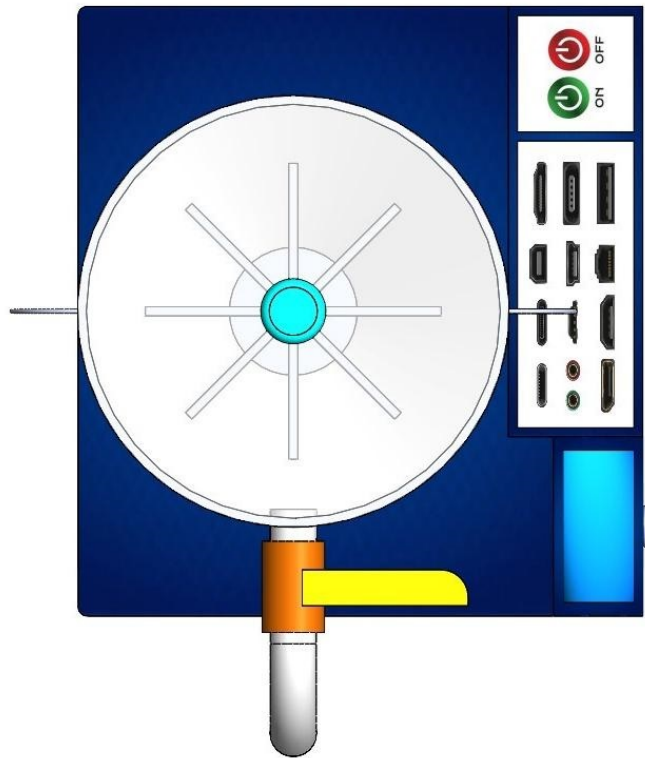
www.gov.uk/ipo

Representation of Designs









Intellectual Property Office is an operating name of the Patent Office

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Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6320607

Grant date: 27 October 2023

Registration date: 20 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. MUTHUSAMY

SEENIVASAN, Dr. SANTHANALAXMI KARTHIKVEL, Dr. BHAVYA BHASURAN

, Dr. BLESSIE PATHMU RAJAKARAN

in respect of the application of such design to:

SOLAR POWERED DESALINATION SYSTEMS

International Design Classification:

Version: 14-2023

Class: 23 FLUID DISTRIBUTION EQUIPMENT, SANITARY, HEATING,
VENTILATION AND AIR CONDITIONING EQUIPMENT, SOLID FUEL

Subclass: 01 FLUID DISTRIBUTION EQUIPMENT

Adam Williams

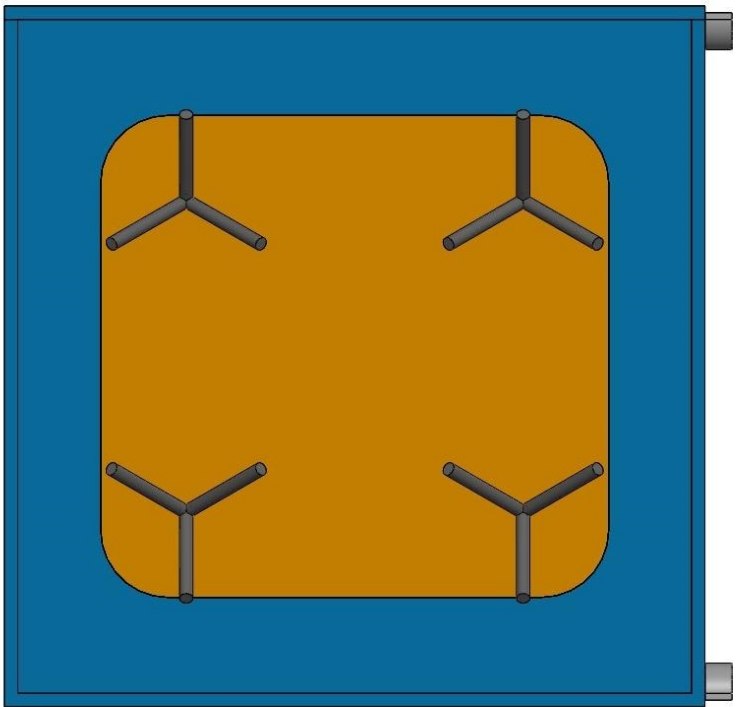
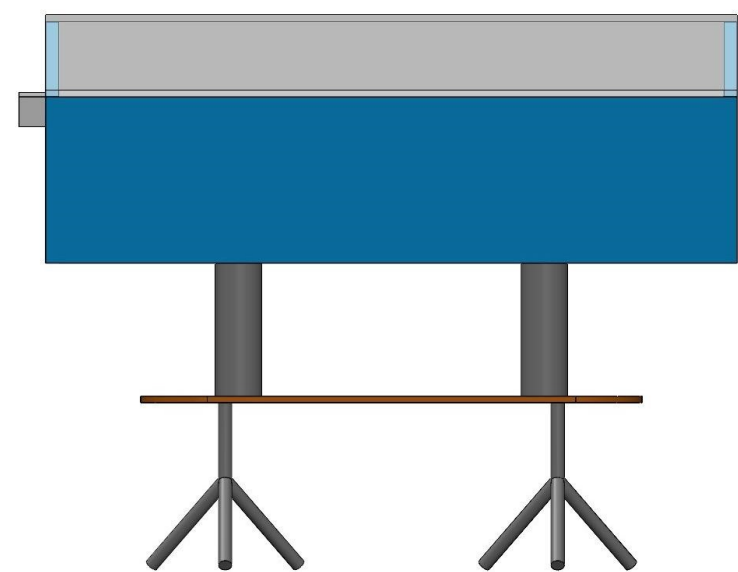
Comptroller-General of Patents, Designs and Trade Marks

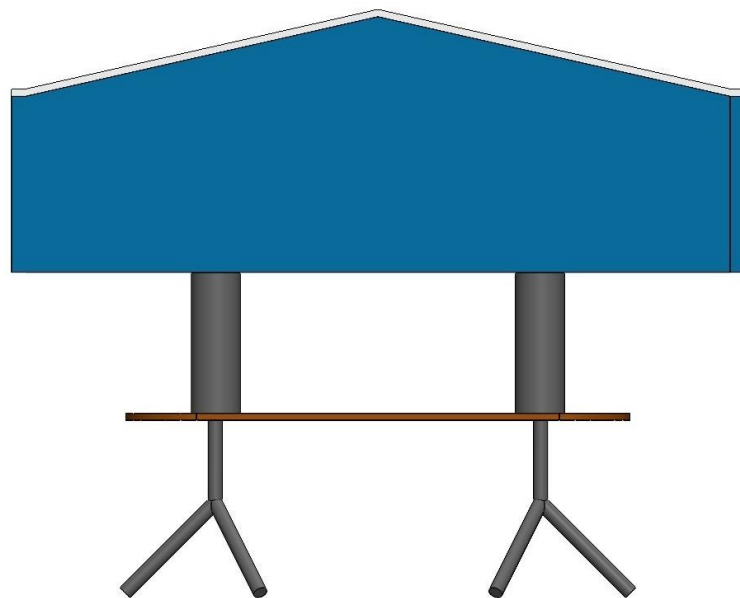
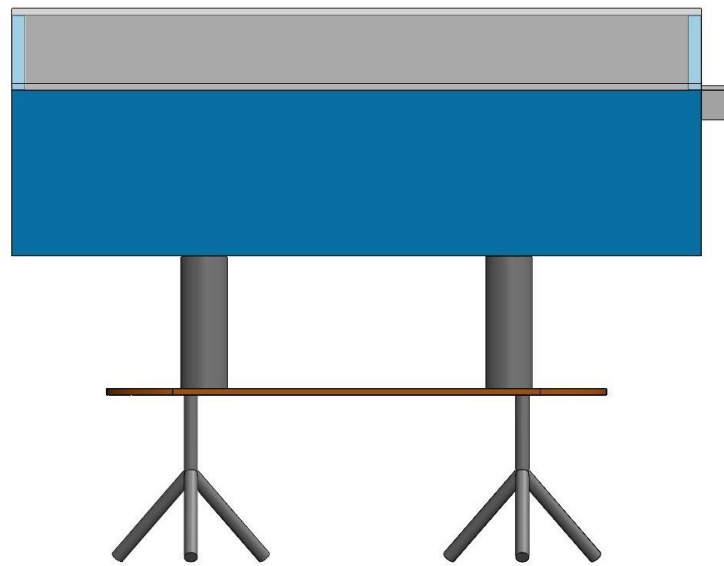
Intellectual Property Office

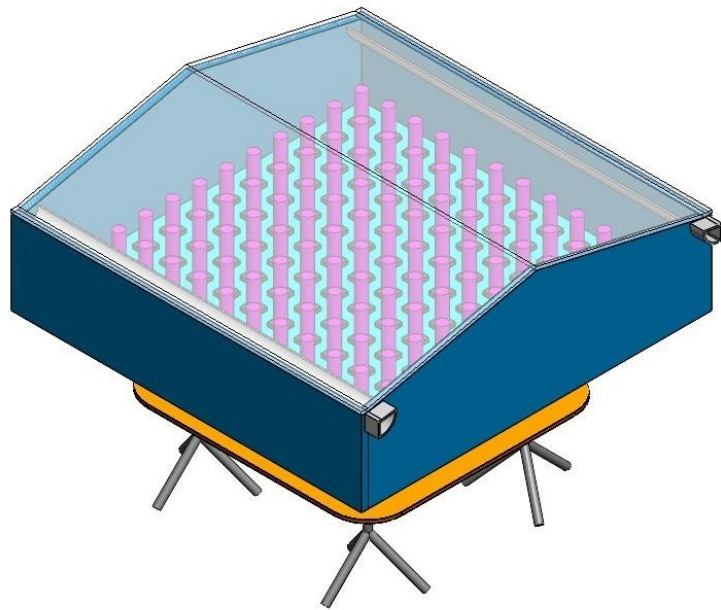
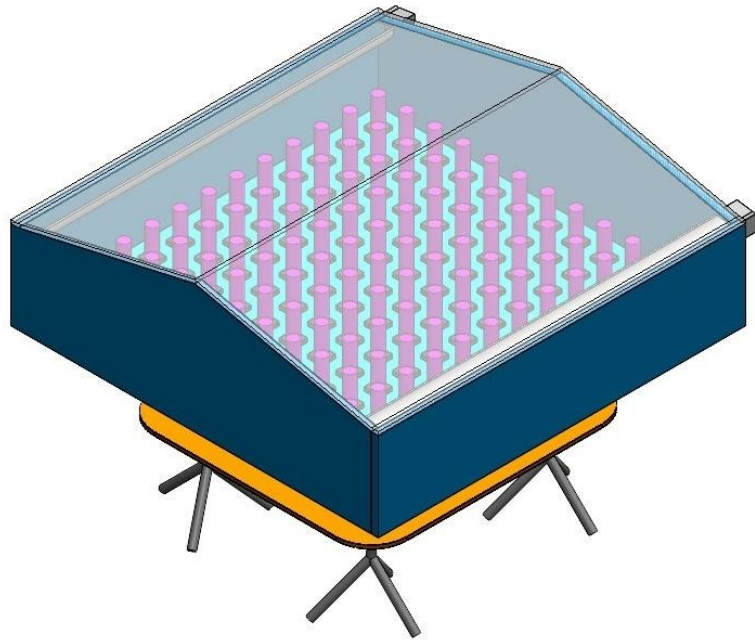
The attention of the Proprietor(s) is drawn to the important notes overleaf.

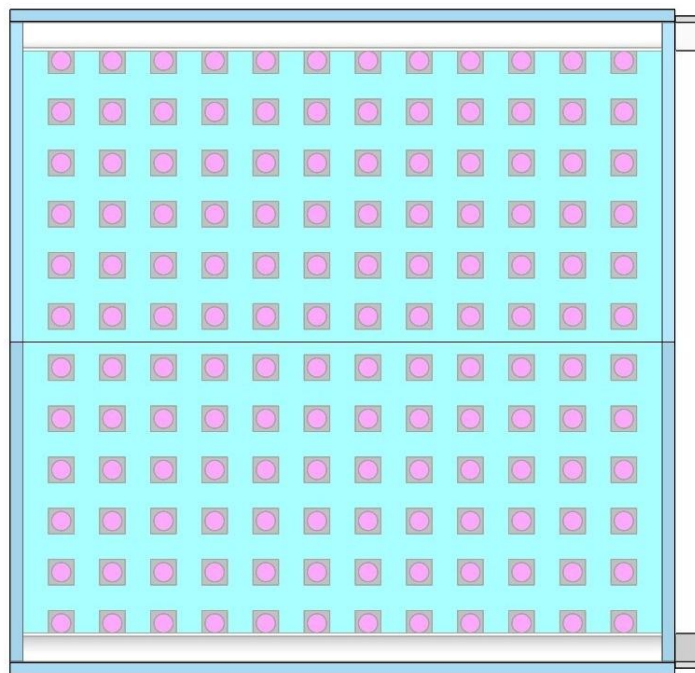
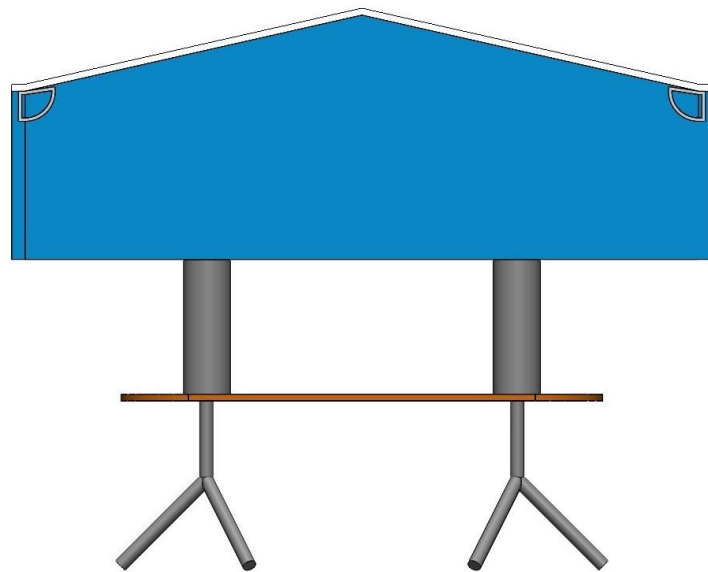


Representation of Designs











Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6320611

Grant date: 27 October 2023

Registration date: 20 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. MUTHUSAMY

SEENIVASAN, Dr. SANTHANALAXMI KARTHIKVEL, Dr. BHAVYA BHASURAN

, Dr. BLESSIE PATHMU RAJAKARAN

in respect of the application of such design to:

FINANCIAL DATA MANAGING DEVICE IN BANK

International Design Classification:

Version: 14-2023

Class: 14 RECORDING, TELECOMMUNICATION OR DATA PROCESSING
EQUIPMENT

Subclass: 02 DATA PROCESSING EQUIPMENT AS WELL AS PERIPHERAL
APPARATUS AND DEVICES

Adam Williams

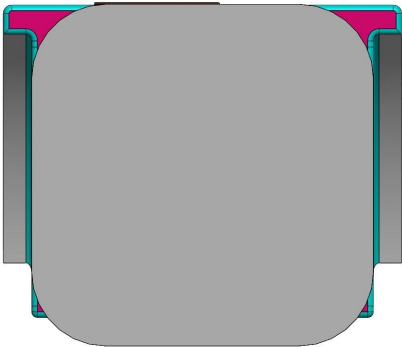
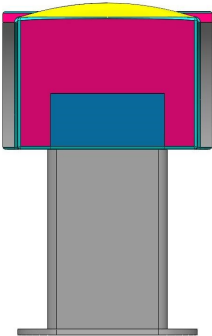
Comptroller-General of Patents, Designs and Trade Marks

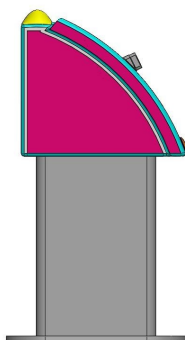
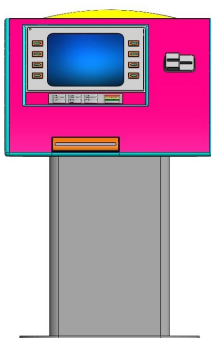
Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.

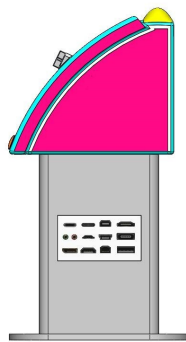
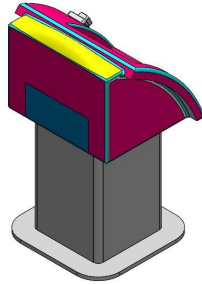


Representation of Designs











Intellectual Property Office is an operating name of the Patent Office

www.gov.uk/ipo



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6308468

Grant date: 19 September 2023

Registration date: 07 September 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. SUNDARARAJ JOE PATRICK GNANARAJ, Dr. VANTHANA JEYASINGH,

Dr. RAJAKARAN BLESSIE PATHMU , Dr. ANDOORKALAM SUBRAMANIAN

PRINCY

in respect of the application of such design to:

SOLAR AND WIND HYBRID ENERGY GENERATION APPARATUS

International Design Classification:

Version: 14-2023

Class: 13 EQUIPMENT FOR PRODUCTION, DISTRIBUTION OR TRANSFORMATION OF ELECTRICITY

Subclass: 04 SOLAR EQUIPMENT

Version: 14-2023

Class: 25 BUILDING UNITS AND CONSTRUCTION ELEMENTS

Subclass: 03 HOUSES, GARAGES AND OTHER BUILDINGS

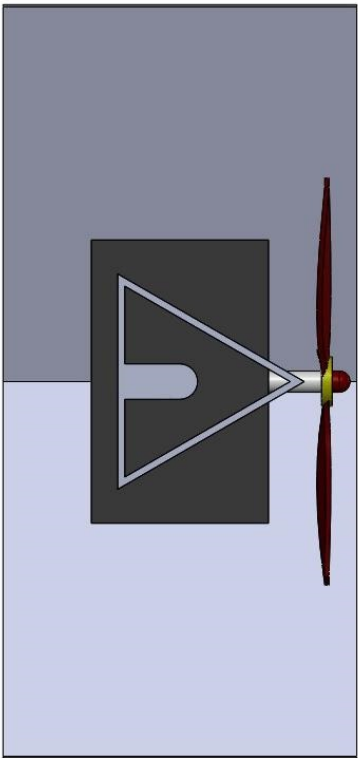
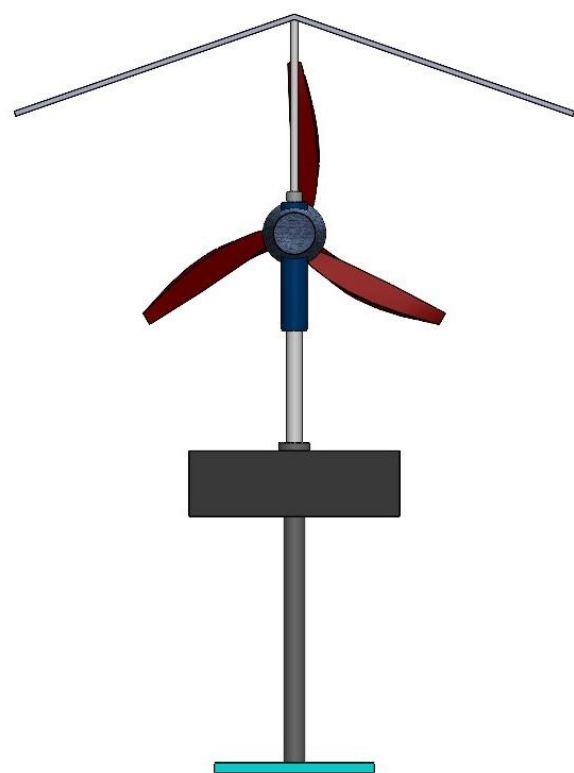
Adam Williams

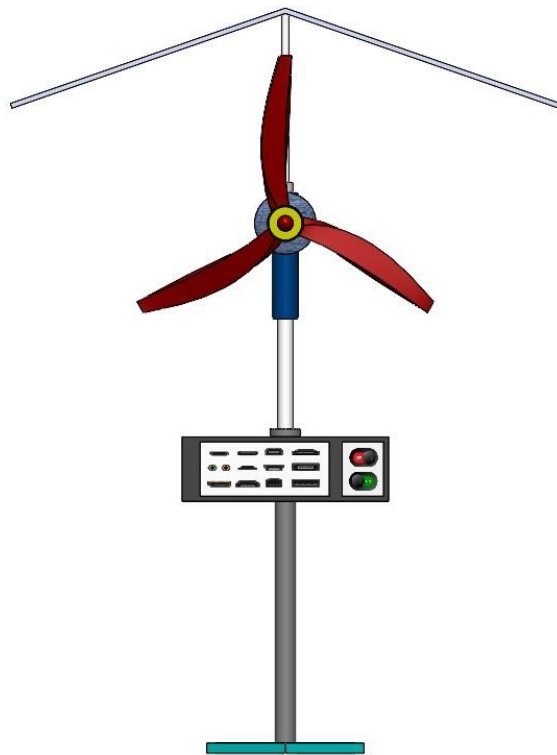
Comptroller-General of Patents, Designs and Trade Marks
Intellectual Property Office

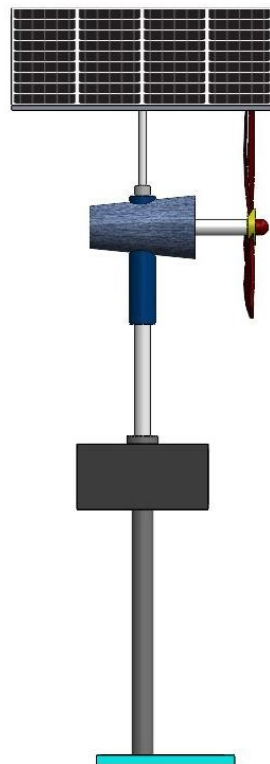
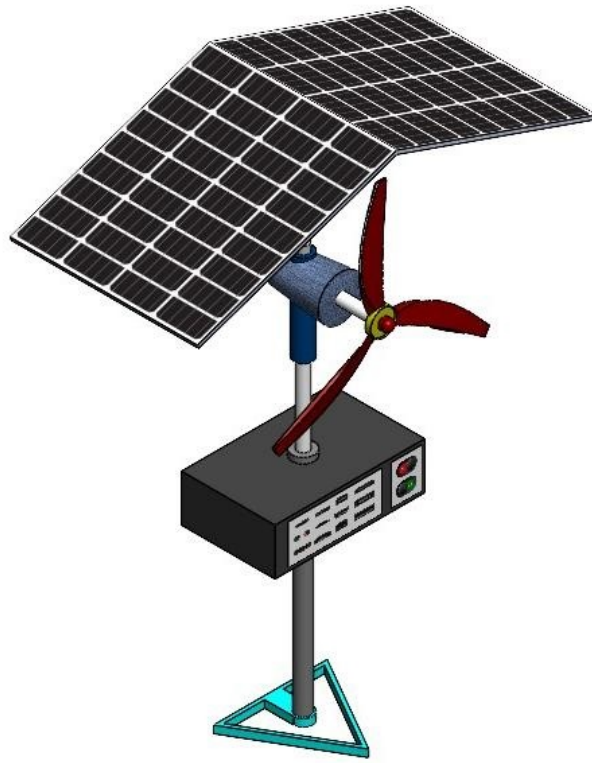
The attention of the Proprietor(s) is drawn to the important notes overleaf.

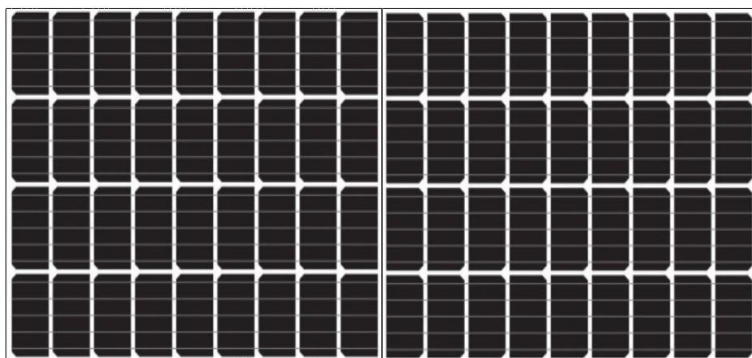


Representation of Designs









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संपत्ति कायदा

ORIGINAL

क्रम सं/ Serial No. : 144345



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 391064-001

तारीख / Date : 25/07/2023

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **DEVICE TO DETECT ENTREPRENEURIAL QUALITIES IN A WOMAN** से संबंधित है, का पंजीकरण, श्रेणी 10-05 में 1.Dr. V. Rajalakshmi 2. Dr. P. Veeramani 3.Dr. R. Portia 4.Ms. Sindhu Krishnan 5.Ms. Kavitha Chandramohan 6.Ms. T. Vanthana 7.Dr. Moli Ghosh 8.Dr. K. Janaki Priya 9.Dr. Leelavathi R 10.Dr. D. Ravindran के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-05 in respect of the application of such design to **DEVICE TO DETECT ENTREPRENEURIAL QUALITIES IN A WOMAN** in the name of 1.Dr. V. Rajalakshmi 2. Dr. P. Veeramani 3.Dr. R. Portia 4.Ms. Sindhu Krishnan 5.Ms. Kavitha Chandramohan 6.Ms. T. Vanthana 7.Dr. Moli Ghosh 8.Dr. K. Janaki Priya 9.Dr. Leelavathi R 10.Dr. D. Ravindran.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 22/09/2023
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

मूल/No : 136022



भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE

डिजाइन के पंजीकरण का प्रमाणपत्र
CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No. : 378974-001
तारीख / Date : 09/02/2023
पारस्परिकता तारीख / Reciprocity Date* :
देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **BIODEGRADABLE HEXAGONAL BOX USING FOR CONTROLLED AND ROOT-TARGETED FERTILIZER DELIVERY** से संबंधित है, का पंजीकरण, श्रेणी **09-03** में 1.Dr. R. Arun Kumar 2. Dr. Sumathy Rengarajan 3.Dr. G. Rajasekhar Reddy, 4.Dr. Y. Sasikumar 5.Ms. Sowndarya K, 6.Dr. K. Ashokkumar, 7.Dr. P. Arjun 8.Dr. S. Azhagumadhavan, 9.Dr. A.Bakrudeen Ali Ahmed, के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class **09-03** in respect of the application of such design to **BIODEGRADABLE HEXAGONAL BOX USING FOR CONTROLLED AND ROOT-TARGETED FERTILIZER DELIVERY** in the name of 1.Dr. R. Arun Kumar 2. Dr. Sumathy Rengarajan 3.Dr. G. Rajasekhar Reddy, 4.Dr. Y. Sasikumar 5.Ms. Sowndarya K, 6.Dr. K. Ashokkumar, 7.Dr. P. Arjun 8.Dr. S. Azhagumadhavan, 9.Dr. A.Bakrudeen Ali Ahmed,.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

INTELLECTUAL
PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 17/05/2023

महानियंत्रक पेटेंट डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

*The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

PATENT OFFICE
INTELLECTUAL PROPERTY BUILDING
Cp-2, Sector V, Salt Lake City, Kolkata-700091
Te No. (091)(033) 23671945-46, 87 FAX No. 033 23671988
E-mail : kolkata-patent@nic.in
Web Site : www.ipindia.gov.in



सत्यमेव जयते

GOVERNMENT OF INDIA

C.B.R. NO : 214341

To
DR.R.ARUN KUMAR
THANJAVUR-613403

Sr No.	Reference Number	Application Number	Name of Article
1	399823-001	399823-001	MANUAL-OPERATED ROUND SWEET MAKER AND DOUGH PREPARATION MACHINE/31-00

PATENT OFFICE

INTELLECTUAL PROPERTY BUILDING

Cp-2, Sector V, Salt Lake City, Kolkata-700091

Te No. (091)(033) 23671945-46, 87 FAX No. 033 23671988

E-mail : kolkata-patent@nic.in

Web Site : www.ipindia.gov.in



सत्यमेव जयते

GOVERNMENT OF INDIA

C.B.R. NO : 214341

To

DR.R.ARUN KUMAR

THANJAVUR-613403

Sr No.	Reference Number	Application Number	Name of Article
1	399823-001	399823-001	MANUAL-OPERATED ROUND SWEET MAKER AND DOUGH PREPARATION MACHINE/31-00



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

पेटेंट प्रमाण पत्र

Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

462008

आवेदन सं. / Application No.

202041048435

फाइल करने की तारीख / Date of Filing

05/11/2020

पेटेंटी / Patentee

1.Dr. S. Sathish 2.Dr. D. Prabu 3.Dr. J. Aravind Kumar 4.Dr. D. Venkatesan

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकरित **AMALGAMATION OF NANO CHITOSAN AND ADSORBENT APPLICATION PROCESS FOR THE REMOVAL OF REACTIVE DYE** नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख नवम्बर 2020 के पांचवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **AMALGAMATION OF NANO CHITOSAN AND ADSORBENT APPLICATION PROCESS FOR THE REMOVAL OF REACTIVE DYE** as disclosed in the above mentioned application for the term of 20 years from the 5th day of November 2020 in accordance with the provisions of the Patents Act, 1970.



(Signature)

Controller of Patents

अनुदान की तारीख : 25/10/2023
Date of Grant :

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, नवम्बर 2022 के पांचवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 5th day of November 2022 and on the same day in every year thereafter.

*चूंकि पेटेंटी व आविष्कारकों की संख्या अधिक है, पेटेंटी व आविष्कारकों के नाम पृष्ठ संख्या 2 पर जारी हैं।
*Since the Number of Patentees / Inventors is more, the name of Patentees / Inventors are continued on Page No. 2



**INTELLECTUAL
PROPERTY INDIA**
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

पेटेंट प्रमाणपत्र के लिए अनुलग्नक/Annexure to Patent Certificate

पेटेंट सं. / Patent No.

462008

आवेदन सं. / Application No.

202041048435

फाइल करने की तारीख / Date of Filing

05/11/2020

पेटेंटी / Patentee (जारी/Continued)

Dr. T. Krithiga

PATENT OFFICE
INTELLECTUAL PROPERTY BUILDING
Cp-2, Sector V, Salt Lake City, Kolkata-700091
Te No. (091)(033) 23671945-46, 87 FAX No. 033 23671988
E-mail : kolkata-patent@nic.in
Web Site : www.ipindia.gov.in



सत्यमेव जयते

GOVERNMENT OF INDIA

C.B.R. NO : 214341

To
DR.R.ARUN KUMAR
THANJAVUR-613403

Sr No.	Reference Number	Application Number	Name of Article
1	399823-001	399823-001	MANUAL-OPERATED ROUND SWEET MAKER AND DOUGH PREPARATION MACHINE/31-00



ORIGINAL

क्रम सं/ Serial No.: 163321



पेटेंट कार्यालय, भारत सरकार

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डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

401670-001

तारीख / Date

08/12/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **INTEGRATED FLUORIMETER** से संबंधित है, का पंजीकरण, श्रेणी 10-05 में Dr T Anand के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-05 in respect of the application of such design to **INTEGRATED FLUORIMETER** in the name of Dr T Anand.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

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जारी करने की तिथि :

Date of Issue

05/04/2024



कृपया ध्यान दें
महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न

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ORIGINAL

क्रम सं/ Serial No.: 156200



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डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 400001-001

तारीख / Date : 15/11/2023

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो 5G BASED REMOTELY CONTROL IOT STREET LAMP से संबंधित है, का पंजीकरण, श्रेणी 26-03 में 1.Dr. Senthilkumar B 2. Dr.T.Vaishnavi 3.Dr.S.Chitra Selvi 4.Dr.Veena K 5.Dr.R.Shalinirajan 6.Mr. Ravi Ranjan Manjul के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 26-03 in respect of the application of such design to 5G BASED REMOTELY CONTROL IOT STREET LAMP in the name of 1.Dr. Senthilkumar B 2. Dr.T.Vaishnavi 3.Dr.S.Chitra Selvi 4.Dr.Veena K 5.Dr.R.Shalinirajan 6.Mr. Ravi Ranjan Manjul.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 09/02/2024
Date of Issue :



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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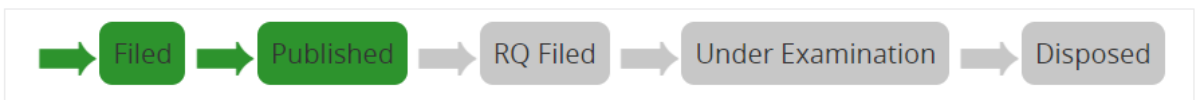
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Government of India

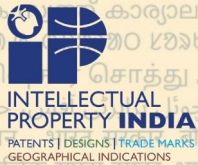


Application Details	
APPLICATION NUMBER	202341058973
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	02/09/2023
APPLICANT NAME	1 . Dr.A. Muniyappan 2 . Dr.A.Muthuraja 3 . Dr.R.Ravichandran 4 . Mrs. Lakshmi Nalla 5 . Dr.R.Shalinirajan 6 . Dr. Arumugam Muthuvel 7 . Dr.K.Deeba 8 . Ms.Lakshmi Rekha Moram 9 . Ms.R.Brindha 10 . Ms.P.Renukadevi
TITLE OF INVENTION	SYSTEM AND METHOD FOR INVENTORY MANAGEMENT
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	senanipindia@gmail.com
ADDITIONAL-EMAIL (As Per Record)	admin@senanip.com
E-MAIL (UPDATED Online)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	06/10/2023

Application Status	
APPLICATION STATUS	Awaiting Request for Examination

			View Documents
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ORIGINAL

क्रम सं/ Serial No.: 174460



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

416966-001

तारीख / Date

15/05/2024

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **IOT BASED CYBER SECURITY DATA ANALYTIC DEVICE** से संबंधित है, का पंजीकरण, श्रेणी 14-02 में 1.Dr Sultanuddin Sj 2. Dr.S. Sujatha 3.Shobana D 4.R.Shalinirajan 5.Dr.R.Suganthi 6.Mr N Vijayaraghavan 7.Mr.Nandhakumar D के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

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डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

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जारी करने की तिथि :

Date of Issue

05/07/2024



कृपया ध्यान दें
कृपया ध्यान दें

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क्रम सं/ Serial No.: 156200



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Certificate of Registration of Design

डिजाइन सं. / Design No.

400001-001

तारीख / Date

15/11/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **5G BASED REMOTELY CONTROL IOT STREET LAMP** से संबंधित है, का पंजीकरण, श्रेणी 26-03 में 1.Dr. Senthilkumar B 2. Dr.T.Vaishnavi 3.Dr.S.Chitra Selvi 4.Dr.Veena K 5.Dr.R.Shalinirajan 6.Mr. Ravi Ranjan Manjul के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

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डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्वधीन प्रावधानों के अनुसरण में।

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जारी करने की तिथि : 09/02/2024
Date of Issue



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Patent Search

Invention Title	"AERO DELIVERY SYSTEM FOR DEED OF DELIVERY IN SURVEILLANCE, MILITARY AND POLICE DEPARTMENTS"
Publication Number	24/2023
Publication Date	16/06/2023
Publication Type	INA
Application Number	202341032348
Application Filing Date	08/05/2023
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	ELECTRONICS
Classification (IPC)	B62K 211200, G06Q 502600, G07F 071000, G08B 131960, H04N 071800

Inventor		
Name	Address	Country
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Ms. D. SHEEMA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, RAJIV GANDHI SALAI, JEPPIAAR NAGAR, CHENNAI, TAMIL NADU, INDIA, PIN, 600119.	India

Applicant		
Name	Address	Country
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY	RAJIV GANDHI SALAI, JEPPIAAR NAGAR, CHENNAI, PIN- 600119, TAMIL NADU, INDIA.	India

Abstract:

Accordingly, embodiments herein disclose an aero delivery system for deed of delivery in military and police departments. The aero delivery system includes a drone collects the information from the system. The drone moves to the address of delivery. The address to which a product has to be delivered is located with the aid of G receiver address and the GPS location of the person to whom it has to be delivered is tracked. In case the receiver moves his location within a specified radius, the dr the updated location and the product is delivered. Both the sender and receiver gets acknowledgement in delivering the product to ease delivery system as a two wa communication.

Complete Specification**FIELD OF INVENTION**

[0001] The present disclosure relates to a drone which is familiarized in surveillance, military and police department used in the deed of delivery, and more partic an aero delivery system for deed of delivery in military and police departments. BACKGROUND OF INVENTION

[0002] With regard to the drone delivery, related products and services have not yet been widely introduced. Even though some of companies are preparing dron delivery services, they drop the package in the front yard of the house, so that the customer is required to depart from the inside of house to receive the package w gives the customer inconvenience.

[0003] As mentioned above, to deliver the package to the customer, drone drop the package in the front yard of the house, so customer is required to depart from inside of house which give user inconvenience. In case of big city, as the most of population resides in the multistory building such as apartment or office building, receiving drone delivered package at the outside of building, inconvenience for the customer who are living in the multistory building is much more serious than th in the private building.

[0004] Typically, the applications of drone are increasing and the inheriting drones for the purpose of delivery system. Though there are test and trials in using it,

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Government of India

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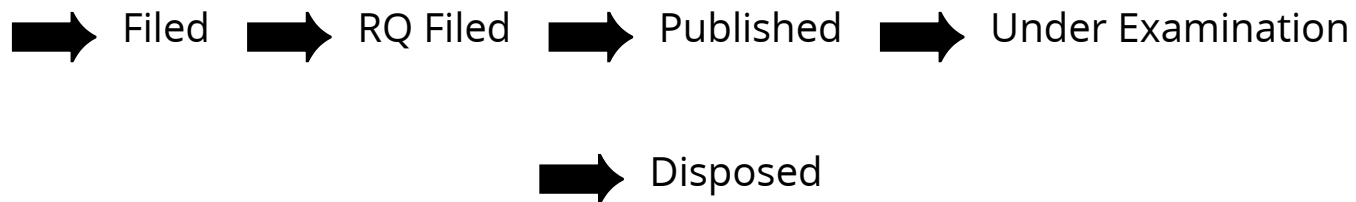


(<http://ipindia.nic.in/index.htm>)

Application Details	
APPLICATION NUMBER	202341032340
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	08/05/2023
APPLICANT NAME	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
TITLE OF INVENTION	"MANEUVERING LENS IN MOBILE GADGETS BY DINT OF SMART GLASS"
FIELD OF INVENTION	PHYSICS
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	info@humcen.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	08/05/2023
PUBLICATION DATE (U/S 11A)	16/06/2023

Application Status	
APPLICATION STATUS	Application Awaiting Examination

			View Documents
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In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in

FORM 5
THE PATENTS ACT, 1970
&
(39 OF 1970)
THE PATENTS RULES, 2003
DECLARATION AS TO INVENTORSHIP
[See section 10(6) and rule 13(6)]



710035101

We, Sathyabama Institute of Science and Technology, Indian Educational Institution having communication address at Rajiv Gandhi Salai, OMR Road, Jeppiaar Nagar, Chennai-600119, TamilNadu, India hereby declare that the true inventor(s) of the invention disclosed in the complete specification filed in pursuance of my application numbered _____ dated this _____ day of _____ 2023 is:

1. Name : Dr.A.Deepa
Nationality: Indian
Address : Assistant Professor,
Computer Science Engineering,
Sathyabama Institute of Science and Technology,
Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nādu, India,
PIN- 600119
2. Name : Dr.T.Sasipraba
Nationality: Indian
Address : Vice Chancellor,
Sathyabama Institute of Science and Technology,
Rajiv Gandhi Salai,
Jeppiaar Nagar, Chennai, Tamil Nādu, India, PIN- 600119
3. Name : Dr.T.Sasikala
Nationality: Indian
Address : Sathyabama Institute of Science and Technology,
Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nādu, India
PIN- 600119
4. Name : Dr.K.Veena
Nationality: Indian
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PIN- 600119
5. Name : Dr.S.Supriya
Nationality: Indian
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Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nādu, India
PIN- 600119

7.Name : Dr.P.Vaishnnave
Nationality: Indian
Address : Sathyabama Institute of Science and Technology,
Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nādu, India
PIN- 600119

Applicant Signature

Sp

Sathyabama Institute of Science and Technology,
Chennai-600119

08-May-2023/45682/202341032340/Form 5

PATENT OFFICE CHEMICAL 42 100 0000 00. 00



*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 143760



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

390367-001

तारीख / Date

14/07/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **SPECTACLE WITH MICROPHONE** से संबंधित है, का पंजीकरण, श्रेणी 16-06 में 1.Dr. D. Sudha 2. Mrs. J. Sarojini Premalatha 3.Ms. G. Abirami 4.Mrs. Lekshmi S Raveendran 5.Mr. S. Vignesh के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 16-06 in respect of the application of such design to **SPECTACLE WITH MICROPHONE** in the name of 1.Dr. D. Sudha 2. Mrs. J. Sarojini Premalatha 3.Ms. G. Abirami 4.Mrs. Lekshmi S Raveendran 5.Mr. S. Vignesh.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 12/09/2023
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6320778

Grant date: 08 January 2024

Registration date: 20 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Poornima Devan, **Mrs. Sarojini Premalatha Jacob**, Ms. Ridhi Mayura Shivani

Rajesh, Mrs. Scinthia Clarinda Samson Pakkianathan, Dr.Lalitha Devi

Kanniyappan, Mrs. Kathambari Panneer Selvam, Ms. Aishwarya Daniel

Kirubakaran, Ms. Gayathri Sivakumar, Mrs. Bobby Murugesan Paramasamy, Ms.

Karunya Krishnamurthy

in respect of the application of such design to:

WEARABLE ELECTRONIC DEVICE FOR BLIND PEOPLE

International Design Classification:

Version: 14-2023

Class: 16 PHOTOGRAPHIC, CINEMATOGRAPHIC AND OPTICAL
APPARATUS

Subclass: 06 OPTICAL ARTICLES

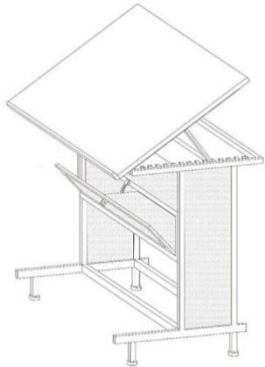
Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.



Design Number	389061-001	
Class	15-03	
1.Mrs. K. Ishwarya Assistant Professor Computer Science and Engineering Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu,600119 2. Dr. N. Nanthini Assistant Professor, Computer Science and Engineering, Sathyabama Institute of Science and Engineering, Chennai, Tamilnadu, India, 600119 3. Mrs. S. Saraswathi Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Chennai, Tamilnadu, India, 600119. 4. Dr. P. Shanmuga Prabha Assistant Professor Computer Science and Engineering Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu,600119		
Date of Registration	26/06/2023	
Title	AGRICULTURE DRONE FOR SPRAYING NUTRIENTS	
Priority NA		
Design Number	387150-001	
Class	06-05	
1.Dr. Mahendra H. Sonawane S. B. Patil College of Architecture and Design, Sector 26, Nigdi, Pradhikaran Pune – 411044, Maharashtra, India 2. Ar. Ajay B. Harale S. B. Patil College of Architecture and Design, Sector 26, Nigdi Pradhikaran Pune – 411044, Maharashtra, India		
Date of Registration	26/05/2023	
Title	DRAFTING TABLE	
Priority NA		
Design Number	389008-001	
Class	07-02	
Uma Vijay Deshpande Flat No.602, Building No. A-7, Karishma, Karve Road, Kothrud Pune – 411 038, Maharashtra,India		
Date of Registration	26/06/2023	
Title	ELECTRIC HEATER FOR DEHYDRATOR	
Priority NA		

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :30/05/2023

(21) Application No.202341037367 A

(43) Publication Date : 16/06/2023

(54) Title of the invention : Sentimental Analysis using Support Vector Machine

(51) International classification :A61B 051600, C12N 158200, G06K 096200, G06N 200000, G06N 201000
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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2)Dr. Sonia Jenifer Rayen

3)Ms. S. Nivetha

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5)Dr. Shanmuga Prabha P.

6)Dr. D. Geethanjali

Name of Applicant : NA

Address of Applicant : NA

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Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabhama Institute of Science and Technology, Semmenchery, Kanchipuram District, Tamil Nadu - 600119

(57) Abstract :

[06] The more frequent use of computing to solve problems involving different areas of knowledge has led to the emergence of new subareas in computing. One of 5 these subareas is related to the use of computational concepts and techniques to achieve a coherent understanding of texts published in virtual social networks. Sentiment Analysis is one of the areas of computing that is responsible for dealing with this type of situation. This work will present the concept and use of Sentiment Analysis applied on Twitter, using the Support Vector Machine Machine Learning 10 Technique from the RapidMiner development environment. Accompanied Drawing [FIG. 1] [FIG. 2] [FIG. 3] [FIG. 4] [FIG. 5] [FIG. 6] [FIG. 7] [FIG. 8] [FIG. 9] [FIG. 10] [FIG. 11]

No. of Pages : 22 No. of Claims : 3

(54) Title of the invention : Sentimental Analysis using Support Vector Machine

(51) International classification :A61B 051600, C12N 158200, G06K 096200, G06N 200000, G06N 201000
 (86) International Application No :PCT//
 Filing Date :01/01/1900
 (87) International Publication No : NA
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
 (62) Divisional to Application Number :NA
 Filing Date :NA

(71)Name of Applicant :

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2)Dr. Sonia Jenifer Rayen**3)Ms. S. Nivetha****4)Ms. N. Nanthini****5)Dr. Shanmuga Prabha P.****6)Dr. D. Geethanjali**

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

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No. of Pages : 22 No. of Claims : 3



Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

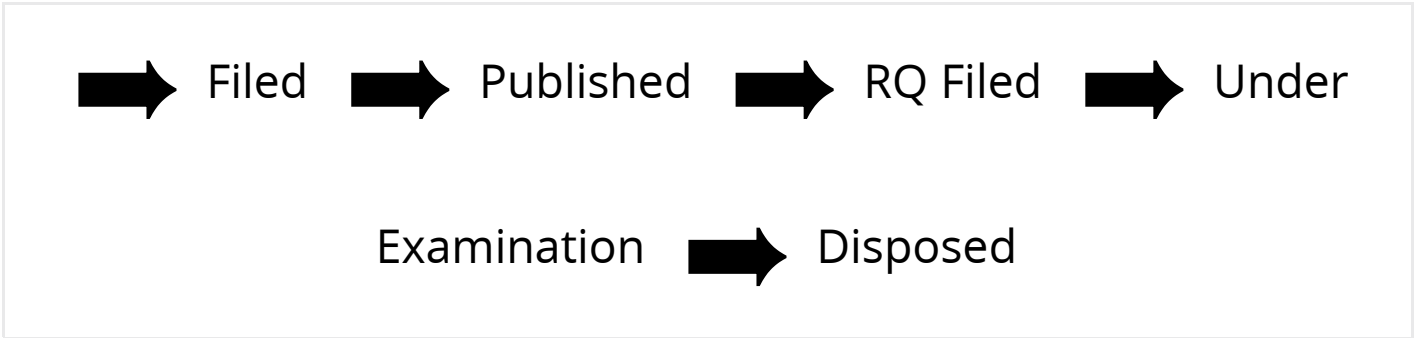
Application Details

APPLICATION NUMBER	202441001280
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	07/01/2024
APPLICANT NAME	1 . Dr.D.Menaka, Sathyabama Institute of Science and Technology 2 . Ms.M.Gowri, Sathyabama Institute of Science and Technology 3 . Ms.G.Kavitha, Sathyabama Institute of Science and Technology 4 . Ms.G.Anbuselvi, Sathyabama Institute of Science and Technology 5 . Dr. Dasari Naga Vinod, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology 6 . Dr.S.Nivetha, Sathyabama Institute of Science and Technology
TITLE OF INVENTION	HEURISTIC NEURAL NETWORK ALGORITHM DEVELOPMENT FOR THE PREDICTION OF UNDERSEA OCEAN PARAMETERS
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	menakamani.m@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	

REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	09/02/2024

Application Status	
APPLICATION STATUS	Awaiting Request for Examination

			View Documents
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In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in



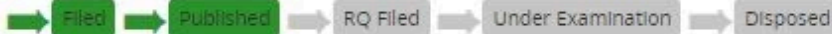
Application Details

APPLICATION NUMBER	202341086594
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	18/12/2023
APPLICANT NAME	1 . Dr.D.Deepa 2 . Dr.V.Samuthira Pandi 3 . Dr.S.Chitra Selvi 4 . Dr.Jayalakshmi M 5 . Dr. M. Hema Kumar 6 . Dr.Amrithalakshmi.T.M 7 . Dr.R.Pazhanimurugan 8 . Ms. Reni Hena Helan R 9 . Mr.S. Partha Sarathi 10 . Dr.S.Sugantha Priya
TITLE OF INVENTION	INTEGRATED AI DRIVEN PREDICTIVE MAINTENANCE SYSTEM FOR INDUSTRIAL IOT
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	senanipindia@gmail.com
ADDITIONAL EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	—
PUBLICATION DATE (U/S 11A)	12/01/2024

Application Status

APPLICATION STATUS	Awaiting Request for Examination
--------------------	----------------------------------

[View Documents](#)



In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :30/05/2023

(21) Application No.202341037367 A

(43) Publication Date : 16/06/2023

(54) Title of the invention : Sentimental Analysis using Support Vector Machine

(51) International classification :A61B 051600, C12N 158200, G06K 096200, G06N 200000, G06N 201000
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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2)Dr. Sonia Jenifer Rayen

3)Ms. S. Nivetha

4)Ms. N. Nanthini

5)Dr. Shanmuga Prabha P.

6)Dr. D. Geethanjali

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

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No. of Pages : 22 No. of Claims : 3

FORM 9
THE PATENT ACT,
1970 (39 OF 1970)
&
The Patents Rules, 2003
REQUEST FOR
PUBLICATION
[See section 11A(2), rule
24A]

1. Name, address, and nationality of the applicant(s).	1. Dr.D. Menaka, Sathyabama Institute of Science and Technology 2. Ms.M.Gowri, Sathyabama Institute of Science and Technology 3. Ms.G.Kavitha, Sathyabama Institute of Science and Technology 4. Ms.G.Anbuselvi, Sathyabama Institute of Science and Technology 5. Dr.Dasari Naga Vinod, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology 6. Dr.S.Nivetha, Sathyabama Institute of Science and Technology
--	---

2. To be signed by the applicant or his authorized registered patent agent.	
---	--

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

I/We Dr.D.Menaka, Sathyabama Institute of Science and Technology Ms.M.Gowri, Sathyabama Institute of Science and Technology Ms.G.Kavitha, Sathyabama Institute of Science and Technology Ms.G.Anbuselvi, Sathyabama Institute of Science and Technology Dr. Dasari Naga Vinod, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology Dr.S.Nivetha, Sathyabama Institute of Science and Technology hereby request for early publication of my/our [Patent Application No.] 202441001280 DATED 07 Jan 2024 UNDER SECTION 11A(2) OF THE ACT.

3. Name of the natural person who has signed Dr. D. Menaka, Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, SH 49A, Chennai, Tamil Nadu 600119.	 Dr. D. Menaka
---	---

To,
The Controller of Patent
The Patent Office, Chennai

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/11/2023

(21) Application No.202341079532 A

(43) Publication Date : 01/12/2023

(54) Title of the invention : MOBILE APPLICATION BASED SLEEP APNOEA MANAGEMENT SYSTEM FOR BIOMEDICAL EXERTION USING CLOUD SERVER

(51) International classification :A61B0005080000, A61B0005000000, A61M0021020000, A61B0005010000, A61P0025200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
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3)Dr. A. SATHIYARAJ
4)M. MAHARASI
5)B BALASAIGAYATHRI
6)RAJA RAJESWARI P U
7)P. MENAGA
8)Dr. R RATHEESH
9)S RAMAMOORTHY
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
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8)Dr. R RATHEESH
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(57) Abstract :

A person's life and health depend on getting enough sleep, which helps to recharge both the body and the mind. The quality of sleep has a huge impact on everyone's lifestyle 'and helps I fend against many ailments. There have been many people who have had problems falling . asleep for a very long time. The term sleep apnoea is used to represent a number of sleep disorders that can affect persons who have a wide range of conditions. Because of The various physical changes that occur when we sleep, many people pass away in our sleep.' A sleep monitoring system is therefore essential. The user will be able to assess different sleep indices, and any irregularities would be reported via a mobile application. Throughout their .whole sleep,- the system can monitor a person's ECG, breathing rate, skin reaction, and oximeter thanks to its array of sensors. This study is capable of collecting and broadcast the' . sleep indices on the mobile application' simultaneously without disturbing the participant thanks to a IoT module. Anyone can use the system because (if the way it has been designed. , According to the findings, this study also considers 'individuals who aren't at danger of experiencing sleep problems. This study will assist readers in understanding sleep 'apnoea, recognizing it, and taking the appropriate precautions

No. of Pages : 19 No. of Claims : 6



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Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details

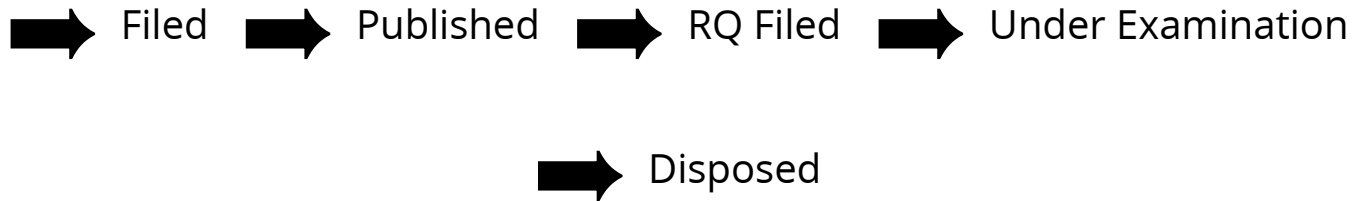
APPLICATION NUMBER	202341079532
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	23/11/2023
APPLICANT NAME	1 . Dr. ISHWARYA M. V 2 . Dr. D. ADHIMUGA SIVASAKTHI 3 . Dr. A. SATHIYARAJ 4 . M. MAHARASI 5 . B BALASAIGAYATHRI 6 . RAJA RAJESWARI P U 7 . P. MENAGA 8 . Dr. R RATHEESH 9 . S RAMAMOORTHY
TITLE OF INVENTION	MOBILE APPLICATION BASED SLEEP APNOEA MANAGEMENT SYSTEM FOR BIOMEDICAL EXERTION USING CLOUD SERVER
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	aidshod@act.edu.in
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	01/12/2023

Application Status

APPLICATION STATUS

Awaiting Request for Examination

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Department of Industrial Policy & Promotion,
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Document Name	*Created Date/Uploaded Date
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15/11/23

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D/126227

"FORM 1" THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 20)				(FOR OFFICE USE ONLY)	
				Application No.	202341079532
				Filing date:	23-11-2023
				Amount of Fee paid:	1750/-
				CBR No:	54201/1
				Signature:	<i>[Signature]</i> 23/11/23
1. APPLICANT'S REFERENCE /IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANT(S)					
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			State	Tamil Nadu

			Country	India
			Pin code	602 105
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			Country	India
			Pin code	600 130
3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]				
Natural Person (✓)	Other than Natural Person			
	Small Entity ()	Startup ()	Others ()	
4. INVENTOR(S) [Please tick (✓) at the appropriate category]				
Are all the inventor(s)	Yes (✓)	No ()		
same as the applicant(s) named above?				
5. TITLE OF THE INVENTION: MOBILE APPLICATION BASED SLEEP APNOEA MANAGEMENT SYSTEM FOR BIOMEDICAL EXERTION USING CLOUD SERVER				
6. AUTHORISED REGISTERED PATENT		IN/PA No.		

AGENT(S)		Name			
		Mobile No.			
7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA		Name		Dr. ISHWARYA M. V, Associate Professor and HEAD, Artificial Intelligence and Data science, Agni College of Technology	
		Postal Address		Old Mahabalipuram Road, Thalambur, Chennai - 600 130, Tamil Nadu	
		Telephone No.			
		Mobile No.		+ (91) - 97898 27194	
		Fax No.			
		E-mail ID		aidshod@act.edu.in	
		8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION			
Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)
9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)					
International application number			International filing date		
10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION					
Original (first) application No.			Date of filing of original (first) application		
11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT					
Main application/patent No.			Date of filing of main application		
12. DECLARATIONS					

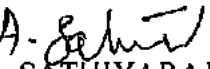
(i) Declaration by the inventor

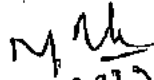
(In case the applicant is an assignee: the inventor may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

We, the above-named inventor are the true & first inventor for this Invention and declare that the applicant herein is our assignee or legal representative.

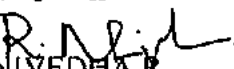
(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Dr. ISHWARYA M. V

(a) Date: 23/11/2023
(b) Signature: 
(c) Name: Dr. D. ADHIMUGA SIVASAKTHI

(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Dr. A. SATHIYARAJ

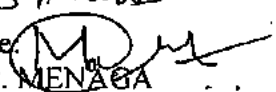
(a) Date: 23.11.2023 
(b) Signature: (M. MAHARASI)
(c) Name: M. MAHARASI

(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Ms. B BALASAIGAYATHRI

(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Ms. NIVEDHA R

(a) Date: 23.11.2023
(b) Signature: 
(c) Name: Sri RAJA RAJESWARI P U

(a) Date: 23.11.2023.

(b) Signature: 

(c) Name: P. MENAGA

(a) Date: 23.11.2023.

(b) Signature: 

(c) Name: Dr. R. RATHESH

(a) Date: 23.11.2023.

(b) Signature: 

(c) Name: S RAMAMOORTHY

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

~~(In case the applicant in India is different than the applicant in the convention country, the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)~~

~~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 signatory~~

(iii) Declaration by the applicant(s)

We the applicant(s) hereby declare(s) that: -

We are in possession of the above-mentioned invention.

The provisional/complete specification relating to the invention is filled with this Application.

☐ The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us-NA

☐ There is no lawful ground of objection(s) to the grant of the Patent to me/us. - NA
We are the true & first inventor(s).

We are the assignee or legal representative of true & first inventor(s).

☐ The application or each of the applications, particulars of which are given in Paragraph-8, was the first application in convention country/countries in respect of my/our invention(s)-NA

We claim the priority from the above-mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which We derive the title.

☐ My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph-9- NA

The application is divided out of my /our application particulars of which is given in Paragraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act

☐ The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph-11 – NA

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete specification) #	No. of pages - One		
No. of Claim(s)	No. of claims Six and No. of pages – Two		
Abstract	No. of pages - One		
No. of Drawing(s)	No. of drawings and No. of pages – Seven and Five		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

(b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(c) Sequence listing in electronic form

(d) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(e) Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.

(f) Translation of priority document/Specification/International Search Report/International Preliminary Report on Patentability.

(g) Statement and Undertaking on Form 3

(h) Declaration of Inventorship on Form 5

(i) _____ Power _____ of _____ Authority

(j) _____

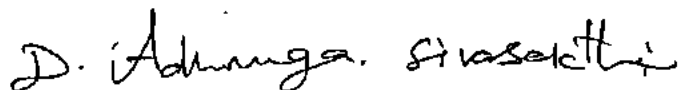
Total fee Rs. 4,500.00 in bearing Demand Draft No. 215123 Dated 21.11.2023 drawn on Axis Bank, Nanganallur Branch.

We hereby declare that to the best of our knowledge, information and belief the fact and matters slated herein are correct and We request that a patent may be granted to us for the said invention.

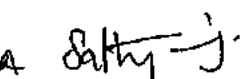
Dated this Thursday of 23rd of November 2023

(a) Signature: 

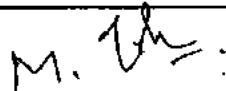
(b) Name: Dr. ISHWARYA M. V

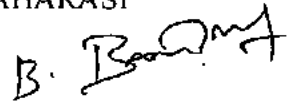
(a) Signature: 

(b) Name: Dr. D. ADHIMUGA SIVASAKTHI

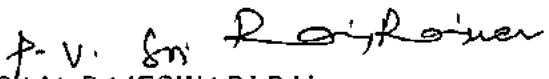
(a) Signature: 

(b) Name: Dr. A. SATHIYARAJ

(a) Signature: 
(b) Name: M. MAHARASI

(a) Signature: 
(b) Name: Ms. B BALASAIGAYATHRI

(a) Signature: 
(b) Name: Ms. NIVEDHA R

(a) Signature: 
(b) Name: Sri RAJA RAJESWARI P U

(a) Signature: 
(b) Name: P. MENAGA

(a) Signature: 
(b) Name: Dr. R. RATHEESH

(a) Signature: 
(b) Name: S RAMAMOORTHY

To,
The Controller of Patents
The Patent Office, at Guindy, Chennai - 600 032.

Note: -

- * Repeat boxes in case of more than one entry.
- * To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
- * Tick (✓)/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
- * Name of the inventor and applicant should be given in full, family name in the beginning.
- * Strike out the portion which is/are not applicable.
- * For fee: See First Schedule";



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THE GAZETTEE OF INDIA – EXTRAORDINARY [PART II—Sec 3(ii)]

FORM 2
THE PATENT ACT 1970
(39 of 1970)
&
The Patents Rules, 2003
COMPLETE SPECIFICATION
(See Section 10 and Rule 13)

COMPLETE

**MOBILE APPLICATION BASED SLEEP APNOEA MANAGEMENT
SYSTEM FOR BIOMEDICAL EXERTION USING CLOUD SERVER**

1. APPLICANT

**(a) NAME: Dr. ISHWARYA M. V, Dr. D. ADHIMUGA SIVASAKTHI,
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Ms. NIVEDHA R, Sri RAJA RAJESWARI P U, P. MENAGA,
Dr. R. RATHEESH, S RAMAMOORTHY**

**The following specification particularly describes the invention
and the manner in which it is to be performed**

Field of Invention

The continuous positive airway pressure (CPAP) therapy is the treatment of choice for obstructive sleep apnea (OSA), however patients' adherence to the therapy is typically less than ideal. Therefore, novel therapies that are centred on the patient's experience are required to improve compliance. The mobile health (mHealth) technology looks to be especially well-suited for this purpose due to the fact that it is both inexpensive and widely available. APPnea is the name of the mobile health application that we worked hard to build with the intention of encouraging patients to self-monitor their CPAP therapy. After that, we examined the viability of APPnea in a sample of OSA patients and determined that it was both feasible and acceptable. Six weeks of treatment with APPnea was administered to a series of OSA patients. This mobile health intervention is not only doable but also meets the needs of patients in a suitable manner. Although bigger randomised trials and cost-effectiveness studies need be undertaken, this research demonstrates that APPnea might stimulate involvement and improve compliance among patients with OSA, hence improving outcomes. These studies should be performed.

Background of Invention

A person's life and health are not complete without sufficient amounts of sleep since it is at this time that one may restore and revitalise both their mind and their body. In order to prevent a wide range of ailments, a person's lifestyle should place a significant emphasis on getting sufficient quality sleep. For a very long time, poor sleep has been a significant issue for a large number of individuals. People who are afflicted with a variety of conditions may struggle with a variety of sleeping problems, the most prevalent of which is sleep apnea. Because of the unbalanced bodily changes that occur during sleep, a significant number of individuals lose their lives. In light of this, having some kind of apparatus that tracks one's sleep is of critical significance. The vast majority of the systems that have been developed in the past to monitor sleeping disorders are unable to cope with the issue of real-time sleeping since they only generate data after a specific amount of time has passed. Monitoring one's sleep in real time is essential for identifying cases of sleep apnea.

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5 Object of Invention

- ❖ Battery
- ❖ Controller
- ❖ ECG Sensor
- ❖ Pulse Oximeter
- ❖ Heart Rate Sensor
- ❖ IoT Module

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5 Summary of Invention

In order to find a solution to this issue, a real-time sleep apnea monitoring system that is based on the Internet of Things (IoT) has been created. The user will be able to monitor their sleep using a variety of indices, and they will get alerts through a mobile application if anything out of the ordinary takes place. The device is equipped with a number of sensors that can monitor a person's electrocardiogram (ECG), heart rate, pulse rate, skin reaction, and SpO2 while they are sleeping. This study is quite helpful since it can test sleep indices without waking the person up, and it can also present the results on a mobile application simultaneously with the use of a Bluetooth module. Both of these capabilities are very valuable. The programme was designed to be user-friendly, making it applicable to a wide range of different types of people. In order to measure the various components of the sleep factor, we utilise the Arduino UNO in conjunction with a variety of analogue sensors. The procedure was seen and evaluated while being carried out on the bodies of several individuals. The system keeps an eye on many individuals while they are sleeping so that it may do real-time analysis and diagnosis of sleep apnea. The findings are shown in the mobile application as well as on the monitor that is attached to each Arduino board. The analysis of the collected data may identify sleep apnea in some of the individuals who the system observed, and it can also reveal the reason why sleep apnea occurs in certain individuals. Using the collected data, this study also investigates the characteristics of individuals who are not at risk for developing sleeping disorders. This article will assist everyone in gaining knowledge about sleep apnea, detecting its symptoms, and taking the appropriate precautions to ward against the condition.

A problem known as sleep apnea is characterised by a parallel connection between the human respiratory system and our brain. It suggests that there is a difficulty with breathing and impediments to respiration when the individual is sleeping. Sleep apnea may be broken down into two categories: obstructive sleep apnea (OSA) and central sleep apnea (CSA). There are occasions when you'll experience both of them at the same instant. It is possible to have complicated sleep apnea, however the condition is so uncommon that it cannot be classified as a kind of apnea. Obstructive sleep apnea, often known as OSA, is essentially a congestion of the upper airway. It is brought on by a relaxation of the muscles in our throats, as well as a reduction in the amount of oxygen that travels down the channel between our nose and our throats. This leads to discomfort when breathing, which may occasionally result in more

5 severe difficulties. Central sleep apnea is less common but more concerning than obstructive
sleep apnea (OSA). The human brain is the most important maintenance centre of the whole
body since every organ and system operates on its directed signal or instruction. As a result,
the human brain's central sleep apnea is subject to significant scrutiny. When the brain fails to
transmit the required instructions or signals to the system that governs our breathing and
10 respiration, this may lead to central sleep apnea. In this case, neurons are unable to send
signals to the breathing muscle, which results in a significant delay in the inhalation of air.
This delay might last for up to ten seconds. And in really unusual circumstances, both of
these things may occur at the same time, which is a problem that requires more than just
immediate medical attention and is also quite concerning.

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5 Detailed Description of Invention.

A system that holds chemical energy & transforms it to electric power is a battery. The chemical processes in a battery require the movement of electrons through an electric field from one substrate (electrode) to the next. An electric charge that can be used to do research is given by the movement of electrons.

10 In an embedded device, a controller is a small integrated circuit programmed to control a particular operation. A traditional controller requires peripheral devices on a single chip for a CPU, memory & input/output (I/O). To control the overall operation of the module like a CPU of a computer.

(4) Figure (iv) shows the Wi-Fi Module

15 The ESP8266 Wi-Fi Module is a self-contained SOC with integrated TCP/IP protocol stack that can give any microcontroller access to your Wi-Fi network. The ESP8266 is capable of either hosting an application or offloading all Wi-Fi networking functions from another application processor. An ESP8266 Wi-Fi module is a SOC microchip mainly used for the development of end-point IoT (Internet of things) applications. It is referred to as a
20 standalone wireless transceiver, available at a very low price. It is used to enable the internet connection to various applications of embedded systems. Espressif systems designed the ESP8266 Wi-Fi module to support both the TCP/IP capability and the microcontroller access to any Wi-Fi network. It provides the solutions to meet the requirements of industries of IoT such as cost, power, performance, and design. It can work as either a slave or a standalone
25 application. If the ESP8266 Wi-Fi runs as a slave to a microcontroller host, then it can be used as a Wi-Fi adaptor to any type of microcontroller using UART or SPI. If the module is used as a standalone application, then it provides the functions of the microcontroller and Wi-Fi network. The ESP8266 Wi-Fi module is highly integrated with RF balun, power modules, RF transmitter and receiver, analog transmitter and receiver, amplifiers, filters, digital
30 baseband, power modules, external circuitry, and other necessary components.

(5) Figure (v) shows the AD8232 ECG Sensor

This sensor is a cost-effective board used to measure the electrical activity of the heart. This electrical activity can be charted as an ECG or Electrocardiogram and output as an analog reading. ECGs can be extremely noisy, the AD8232 Single Lead Heart Rate Monitor acts as
35 an op-amp to help obtain a clear signal from the PR and QT Intervals easily. The AD8232 is

5 an integrated signal conditioning block for ECG and other biopotential measurement applications. It is designed to extract, amplify, and filter small biopotential signals in the presence of noisy conditions, such as those created by motion or remote electrode placement. The AD8232 module breaks out nine connections from the IC that you can solder pins, wires, or other connectors to. SDN, LO+, LO-, Output, 3.3V, GND provide
10 essential pins for operating this monitor with an Arduino or other development board. Also provided on this board are RA (Right Arm), LA (Left Arm), and RL (Right Leg) pins to attach and use your own custom sensors. Additionally, there is an LED indicator light that will pulsate to the rhythm of a heartbeat. The AD8232 ECG sensor is a commercial board used to calculate the electrical movement of the human heart. This action can be chart like an
15 Electrocardiogram and the output of this is an analog reading. Electrocardiograms can be very noisy, so to reduce the noise the AD8232 chip can be used. The working principle of the ECG sensor is like an operational amplifier to help in getting a clear signal from the intervals simply. The AD8232 sensor is used for signal conditioning in ECG as well as other measurement applications of biopotential. The main purpose of this chip is to amplify, extract
20 as well as filter biopotential signals which are small in the noisy conditions like those formed through the replacement of remote electrode as well as motion.

(6) Figure (vi) shows the Heart Beat Sensor

The basic heartbeat sensor consists of a light emitting diode and a detector like a light detecting resistor or a photodiode. The heart beat pulses cause a variation in the flow of blood
25 to different regions of the body. When a tissue is illuminated with the light source, i.e., light emitted by the led, it either reflects (a finger tissue) or transmits the light (earlobe). Some of the light is absorbed by the blood and the transmitted or the reflected light is received by the light detector. The amount of light absorbed depends on the blood volume in that tissue. The LED needs to be of super-bright intensity because maximum light passes and spreads if a
30 finger placed on the LED is detected by the detector. Now, when the heart pumps blood through the blood vessels, the finger becomes slightly more opaque; due to this, less amount of light reaches from the LED to the detector. With every heart pulse generated, the detector signal gets varied. The varied detector signal is converted into an electrical pulse. This electrical signal gets amplified and triggered through an amplifier which gives an output of
35 +5V logic level signal. The output signal is also directed by a LED display that blinks on each heartbeat rate.

5 (7) Figure (vii) shows the Pulse Oximeter

Pulse oximetry is a non-invasive method for monitoring a person's oxygen saturation. Peripheral oxygen saturation (SpO_2) readings are typically within 2% accuracy (within 4% accuracy in the worst 5% of cases) of the more desirable (and invasive) reading of arterial oxygen saturation (SaO_2) from arterial blood gas analysis. But the two are correlated well enough that the safe, convenient, non-invasive, inexpensive pulse oximetry method is valuable for measuring oxygen saturation in clinical use. The most common approach is transmissive pulse oximetry. In this approach, a sensor device is placed on a thin part of the patient's body, usually a fingertip or earlobe, or an infant's foot. Fingertips and earlobes have higher blood flow rates than other tissues, which facilitates heat transfer. The device passes two wavelengths of light through the body part to a photodetector. It measures the changing absorbance at each of the wavelengths, allowing it to determine the absorbances due to the pulsing arterial blood alone, excluding venous blood, skin, bone, muscle, fat, and (in most cases) nail polish. Pulse oximetry is a simple, relatively cheap and non-invasive technique to monitor oxygenation. It monitors the percentage of haemoglobin that is oxygen-saturated. Oxygen saturation should always be above 95%, although in those with long-standing respiratory disease or cyanotic congenital heart disease, it may be lower, corresponding to disease severity. The oxyhaemoglobin dissociation curve becomes sharply steep below about 90%, reflecting the more rapid desaturation that occurs with diminishing oxygen partial pressure (PaO_2). On most machines the default low oxygen saturation alarm setting is 90%. Pulse oximetry does not provide information on the oxygen content of the blood or on ventilation.

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5 Drawings

Block Diagram

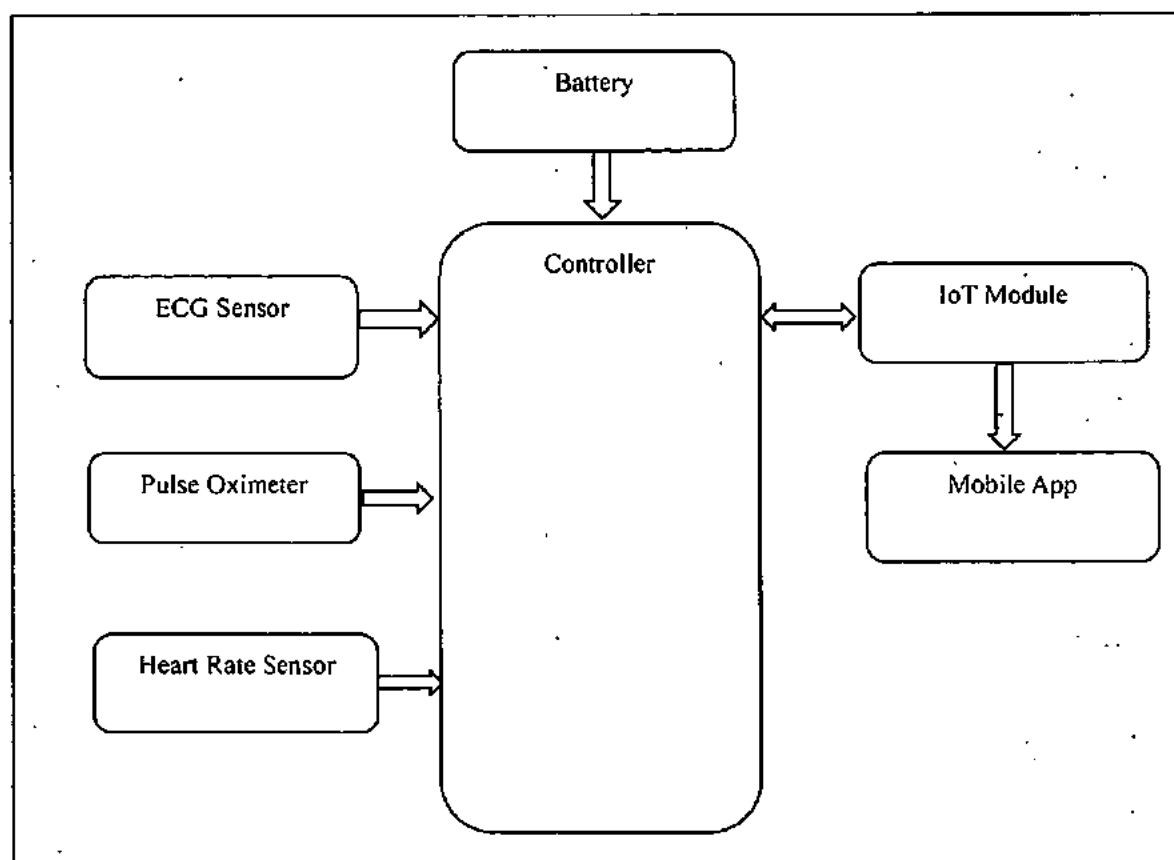


Figure (i) shows the Block Diagram



Figure (ii) shows the Power Supply or Battery

5

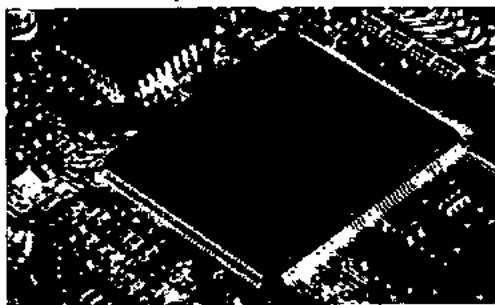


Figure (iii) shows the Controller

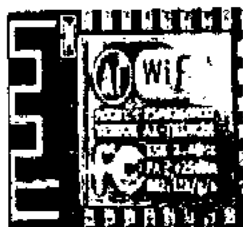


Figure (iv) shows the Wi-Fi Module

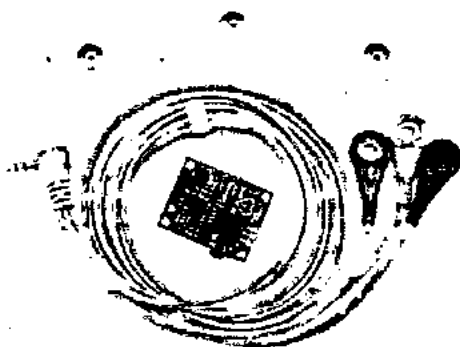


Figure (v) shows the AD8232 ECG Sensor

10

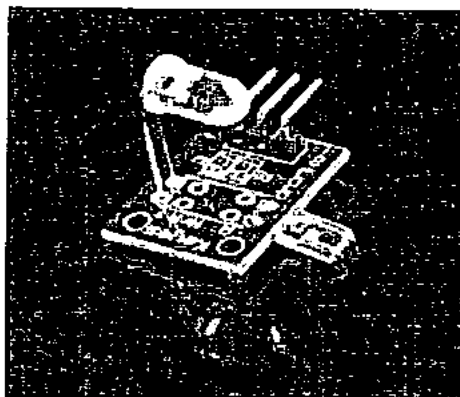


Figure (vi) shows the Heart Beat Sensor

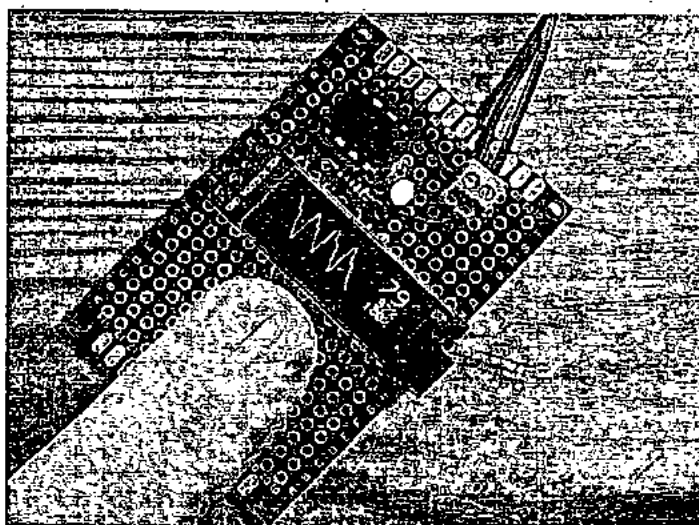


Figure (vii) shows the Pulse Oximeter

5 Detailed Description of Drawings

(1) Figure (i) shows the Block Diagram

(2) Figure (ii) shows the Power Supply or Battery

A system that holds chemical energy & transforms it to electric power is a battery. The chemical processes in a battery require the movement of electrons through an electric field from one substrate (electrode) to the next. An electric charge that can be used to do research is given by the movement of electrons.

(3) Figure (iii) shows the Controller

In an embedded device, a controller is a small integrated circuit programmed to control a particular operation. A traditional controller requires peripheral devices on a single chip for a CPU, memory & input/output (I/O). To control the overall operation of the module like a CPU of a computer.

(4) Figure (iv) shows the Wi-Fi Module

The ESP8266 Wi-Fi Module is a self-contained SOC with integrated TCP/IP protocol stack that can give any microcontroller access to your Wi-Fi network. The ESP8266 is capable of either hosting an application or offloading all Wi-Fi networking functions from another application processor.

(5) Figure (v) shows the AD8232 ECG Sensor

This sensor is a cost-effective board used to measure the electrical activity of the heart. This electrical activity can be charted as an ECG or Electrocardiogram and output as an analog reading. ECGs can be extremely noisy, the AD8232 Single Lead Heart Rate Monitor acts as an op-amp to help obtain a clear signal from the PR and QT Intervals easily. The AD8232 is an integrated signal conditioning block for ECG and other biopotential measurement applications. It is designed to extract, amplify, and filter small biopotential signals in the presence of noisy conditions, such as those created by motion or remote electrode placement.

The AD8232 module breaks out nine connections from the IC that you can solder pins, wires, or other connectors to. SDN, LO+, LO-, Output, 3.3V, GND provide essential pins for operating this monitor with an Arduino or other development board. Also provided on this board are RA (Right Arm), LA (Left Arm), and RL (Right Leg) pins to attach and use your

5 own custom sensors. Additionally, there is an LED indicator light that will pulsate to the rhythm of a heartbeat.

(6) Figure (vi) shows the Heart Beat Sensor

10 The basic heartbeat sensor consists of a light emitting diode and a detector like a light detecting resistor or a photodiode. The heart beat pulses cause a variation in the flow of blood to different regions of the body. When a tissue is illuminated with the light source, i.e., light emitted by the led, it either reflects (a finger tissue) or transmits the light (earlobe). Some of the light is absorbed by the blood and the transmitted or the reflected light is received by the light detector. The amount of light absorbed depends on the blood volume in that tissue. The
15 detector output is in form of electrical signal and is proportional to the heart beat rate.

(7) Figure (vii) shows the Pulse Oximeter

Pulse oximetry is a non-invasive method for monitoring a person's oxygen saturation. Peripheral oxygen saturation (SpO_2) readings are typically within 2% accuracy (within 4% accuracy in the worst 5% of cases) of the more desirable (and invasive) reading of arterial
20 oxygen saturation (SaO_2) from arterial blood gas analysis. But the two are correlated well enough that the safe, convenient, non-invasive, inexpensive pulse oximetry method is valuable for measuring oxygen saturation in clinical use. The most common approach is transmissive pulse oximetry. In this approach, a sensor device is placed on a thin part of the patient's body, usually a fingertip or earlobe, or an infant's foot. Fingertips and earlobes have
25 higher blood flow rates than other tissues, which facilitates heat transfer. The device passes two wavelengths of light through the body part to a photodetector. It measures the changing absorbance at each of the wavelengths, allowing it to determine the absorbances due to the pulsing arterial blood alone, excluding venous blood, skin, bone, muscle, fat, and (in most cases) nail polish.

Different Embodiment of Invention

- i. A fundamental microcontroller and a selection of the most important health-related sensors were used in the process of developing and implementing the system. A very simple web application for app development was used in the production of the mobile application.
- ii. After analysing the data from five different persons, the system provides findings that are highly enough for making conclusions about sleep apnea. According to the findings, it is evident that two individuals do not exhibit any symptoms that are associated with any kind of sleep apnea.
- iii. Major difficulties with sleep circumstances are being experienced by one individual between the ages of 36 and 50. The algorithm was able to identify the individual as having a case of sleep apnea effectively.
- iv. An individual's obstructed sleep apnea may also be identified by the method. After reviewing the findings, it is abundantly evident that the individual whose age is 50 or more is a patient who suffers from OSA.
- v. People will be able to identify sleep apnea at an earlier stage with the assistance of this form of monitoring. People will be able to learn about sleep apnea and the technique to identify it, and it will also help individuals get rid of all of their sleeping difficulties. As a result, this study may aid people.

Application of Invention

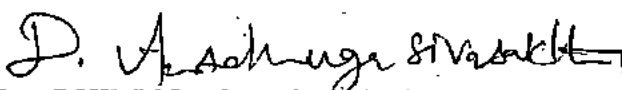
- a. The prevalence of sleeping disorders is far greater now than it was in the past. Sleep apnea is being brought on by an increase in the prevalence of conditions such as hypertension, difficulties associated to stress, and heart-related disorders.
- 10 b. The monitoring of sleep apnea and the detection of the precise length of sleep apnea will be made much easier and more sustainable by our method. This system is capable of functioning at a greater level while sustaining itself.
- c. Not only does it identify sleep apnea, but it may also notify the patient that they should discuss the data gathered from the system with their doctor. This not only
15 makes the lives of patients simpler, but it also identifies sleep apnea.
- d. And if we add more advanced technology to the mix, such high-level X-rays and other monitoring devices, we should be able to keep the project going in the years to come. The system may benefit from the addition of several more sensors in order to broaden its applicability.
- 20 e. The system could benefit from the addition of an LM35 temperature sensor. Even though those elements only have a tangential relationship with sleep apnea, this system might be improved with the addition of a DHT11 humidity sensor, which would make it more useful.

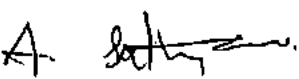
5 **We Claim**

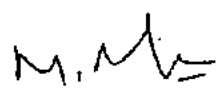
The invention of Mobile Application based Sleep Apnoea Management System for Biomedical Exertion using Cloud Server comprises of:

1. The majority of studies measuring or monitoring sleep apnea employ data from ECGs in addition to other types of data. The majority were being monitored by medical professionals in a hospital setting.
2. The gadget will allow patients to achieve even greater output while maintaining the convenience of being at home and using it. Patients will be able to take preventative measures with the use of real-time data since it will provide quick updates on apnea indices.
3. This gadget is an extra advantage for people who are physically or mentally impaired, as well as older folks, since it provides notification data to the patient's concerned person.
4. This allows the concerned person to take care of any challenges that may arise at any moment. In the next step of this process, we will attempt to generate our own dataset using this real-time data.
5. The analysis of this dataset using several machine learning models in order to get a deeper understanding of the whole system as well as how our system can function more effectively.
6. It is a gift to live a life that is healthy and sound, free from any kind of sleeping condition, and technology can definitely guarantee that.


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S. P. Ramamoorthy.
(S RAMAMOORTHY)

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Abstract

A person's life and health depend on getting enough sleep, which helps to recharge both the body and the mind. The quality of sleep has a huge impact on everyone's lifestyle and helps fend against many ailments. There have been many people who have had problems falling asleep for a very long time. The term "sleep apnoea" is used to represent a number of sleep disorders that can affect persons who have a wide range of conditions. Because of the various physical changes that occur when we sleep, many people pass away in our sleep. A sleep monitoring system is therefore essential. The user will be able to assess different sleep indices, and any irregularities would be reported via a mobile application. Throughout their whole sleep, the system can monitor a person's ECG, breathing rate, skin reaction, and oximeter thanks to its array of sensors. This study is capable of collecting and broadcast the sleep indices on the mobile application simultaneously without disturbing the participant thanks to a IoT module. Anyone can use the system because of the way it has been designed. According to the findings, this study also considers individuals who aren't at danger of experiencing sleep problems. This study will assist readers in understanding sleep apnoea, recognising it, and taking the appropriate precautions.



CBR-NO => 54201
DATE => 23-11-2023
AMOUNT => 2750/-
23/11/23

[□□□ -II खण्ड 3 (ii)]

भारत का राजपत्र : आसाधारण

91

FORM 9
THE PATENT ACT, 1970
(39 of 1970)
&
The Patents Rules, 2003
REQUEST FOR PUBLICATION
[See Section 11(2); rule 24A]

1. Name, Address and Nationality of the Applicant

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Ms. NIVEDHA R, Sri RAJA RAJESWARI P U, P. MENAGA,
Dr. R. RATHEESH, S RAMAMOORTHY

2. To be Signed by the Applicant
Or his authorized registered
Patent Agent

hereby request for early publication of our
application for Patent No.....dated
..... under section 11A(2) of the Act.
Dated thisday of20..

3. Name of the Natural Person Has signed

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To

The Controller of Patents,
The Patent Office,
At Guindy, Chennai 600 032.

Note:- For Fee: See First Schedule

[illegible]

ORIGINAL

क्रम सं/ Serial No. : 149810

पेटेंट कार्यालय, भारत सरकार

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ডিজাইন সং. / Design No.

तारीख / Date

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *IOT AND AI BASED DRIVER DROWSINESS*

Mohan 3.Dr. R.Meenakshi 4.Mrs. A.Muthulakshmi 5.Mrs. S.Sharanyaa के नाम में उपर्युक्त

Certified that the design of which a copy is annexed hereto has been registered as of

design to IOT AND AI BASED DRIVER DROWSINESS DETECTING DEVICE in the name of 1 Dr. Prabakar D 2 Mr. S. Mohan 3 Dr. B. Meenakshi 4 Mrs. A. Muthulakshmi 5 Mr.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यक्षीन प्रावधानों के अनुसरण में

Designs Rules, 2001.

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जारी करने की तिथि: 08/12/2022

Date of Issue : 08/12/2023
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(51) International classification :G06Q0050000000, G06N0020000000, G06Q0030020000, G16H0050200000, G06F0040300000
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Application Number :NA
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Number :NA
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(57) Abstract :
This research introduces an innovative system and method for analyzing bride and groom activities on social media platforms using artificial intelligence (AI) techniques. As social media becomes increasingly integral to personal life events, particularly weddings, there is a growing need for automated analysis of this vast data to extract meaningful insights and trends. The proposed system comprises five key modules: data collection, data preprocessing, analysis, insights generation, and user interface. The data collection module gathers information from various social media platforms, including posts, images, videos, comments, hashtags, and metadata. The preprocessing module cleans and normalizes this data, preparing it for analysis. The analysis module employs advanced AI techniques, including natural language processing (NLP), computer vision, and machine learning algorithms, to identify patterns, trends, and sentiments related to wedding activities. The insights generation module transforms the analysis results into actionable insights, providing reports, visualizations, and recommendations about wedding trends, popular themes, and preferred vendors. Users can interact with these insights through a user-friendly interface, allowing for customized analyses and report downloads. The method of operation involves a five-step process: data collection, preprocessing, analysis, insights generation, and user interaction. This systematic approach ensures comprehensive analysis of social media data related to weddings. The system's applications are diverse, ranging from assisting wedding planning services in understanding the latest trends to helping vendors tailor their offerings based on current preferences. Social media platforms can also leverage this system to enhance user engagement by providing personalized wedding-related content. This invention represents a significant advancement in the application of AI to social media analysis, specifically in the context of weddings. By automating the process of extracting insights from vast amounts of social media data, it provides valuable tools for the wedding industry to better understand and serve their clientele, while also enhancing the user experience on social media platforms.

7:54

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Department of Industrial Policy and Promotion
Ministry of Commerce and Industry

Design Application Details

Application Number:

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Cbr Number:

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Cbr Date:

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2. Dr. M. Logeshwari
3. Dr. Shanmuga Prabha P
4. Ms. Monisha Kumari S

Design Application Status

Application Status:

Design Accepted and Published, Journal No is 05/2024 and Journal Date is 02/02/2024

[Back](#)

Disclaimer: Application status is available for the application filed on or after 1st April 2009 with application no 222230. The information under " Design Application Status" is dynamically retrieved and is under testing, therefore the information retrieved by this system is not valid for any legal proceedings under the Design Act 2000. In case of any discrepancy you may contact the Controller General of Patents, Designs and Trademarks.



ORIGINAL

क्रम सं/ Serial No.: 143096



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डिजाइन सं. / Design No.

385874-001

तारीख / Date

09/05/2023

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In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue 04/09/2023



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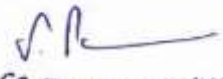
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School of Building and Environment

Department of Civil Engineering

3.4.3 Patents Published / Granted – 2023-2024

S.No.	Name of the Patenter	Patent Number	Title of the patent
1.	Dr. Kumaraswamy, Dr. V. Sampath Kumar Dr.S.Arun Kumar, Dr.Subhash Chand Mr.V.Hariprasath, Dr.C.Gnanavel Dr.N.Poyyamozhi, Challa Parvati Rudesh Mr.S. Baskar, Dr.T.Vinod Kumar	388195-001	UV Reactor for water Treatment
2.	Dr. Kumaraswamy, Dr.Asheesh Sehgal, Dr.Puneet Singh Gautam, Mr.B. Padmalosan, Dr.S. Ramasubramanian, Dr.S. Padmanabhan, Dr.N.Poyyamozhi, Mr.S.Sivabalan, Mr.S. Baskar, Dr.V S. Shaisundaram	388645-002	Portable Water Filter with Storage tank
3.	Dr. Kumaraswamy, Dr.N. Beemkumar, Dr.Subhash Chand, Dr. V. Sampath Kumar, Mr.B. Padmalosan, Mr.Ajay Pratap Singh, Dr.S. Gnanam, Dr.R.Pugazhenth, Dr.M.Chadrasekar, Dr.S.Jacob	388645-001	Water Filtration and Cooling System
4.	Dr.Amit Kumar, Dr.Sampathkumar, Dr.D.Sendil Kumar, Mr.Pramod Kumar, Abinaya Ishwarya G.K., Gaurav Nandan, Mr.S.P.Gowtham, Mr.P.Jagadeesh, Mr.V.K.Vasanth, Dr.G.Sharmila, Dr.P.R.Kalyana Chakravarthy	400782-001	Device to measure Soil moisture level
5.	Sathyabama Inst. of Science and Tech. Dr.V.K. Bupesh Raja, Dr.B. Sheela Rani Dr.V. Ganesh Kumar, Dr.R.Padmapriya Mr.J.Baalamurugan, Mr. Sairam Mr. Akash Mishra, Mr. Ritam Das	333876-001	Muffler


(S. Packialakshmi)

HOD/CIVIL

HEAD OF THE DEPARTMENT
DEPARTMENT OF CIVIL ENGINEERING
SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Jeppiyapur Nagar, Rajiv Gandhi Salai,
Chennai – 600 119.



ORIGINAL

क्रम सं/ Serial No.: 144673



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

388195-001

तारीख / Date

12/06/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **UV REACTOR FOR WATER TREATMENT** से संबंधित है, का पंजीकरण, श्रेणी 23-01 में 1.Dr. Kumaraswamy J 2. Dr. V. Sampathkumar 3.Dr. S. Arunkumar 4.Dr. Subhash Chand 5.Mr. V. Hariprasath 6.Dr. C. Gnanavel 7.Dr. N. Poyyamozhi 8.Challa Parvathi Rudesh 9.Mr. S.Baskar 10.Dr. T. Vinod Kumar के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-01 in respect of the application of such design to **UV REACTOR FOR WATER TREATMENT** in the name of 1.Dr. Kumaraswamy J 2. Dr. V. Sampathkumar 3.Dr. S. Arunkumar 4.Dr. Subhash Chand 5.Mr. V. Hariprasath 6.Dr. C. Gnanavel 7.Dr. N. Poyyamozhi 8.Challa Parvathi Rudesh 9.Mr. S.Baskar 10.Dr. T. Vinod Kumar.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 27/09/2023
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 144679



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

388645-002

तारीख / Date

19/06/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **PORTABLE WATER FILTER WITH STORAGE TANK** से संबंधित है, का पंजीकरण, श्रेणी 23-01 में 1.Dr. Kumaraswamy J 2. Mr. Asheesh Sehgal 3.Dr. Puneet Singh Gautam 4.Mr. P. Padmalosan 5.Dr. S. Ramasubramanian 6.Dr. S. Padmanabhan 7.Dr. N. Poyyamozhi 8.Mr. S. Sivabalan 9.Mr. S. Baskar 10.Dr. V S Shaisundaram के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-01 in respect of the application of such design to **PORTABLE WATER FILTER WITH STORAGE TANK** in the name of 1.Dr. Kumaraswamy J 2. Mr. Asheesh Sehgal 3.Dr. Puneet Singh Gautam 4.Mr. P. Padmalosan 5.Dr. S. Ramasubramanian 6.Dr. S. Padmanabhan 7.Dr. N. Poyyamozhi 8.Mr. S. Sivabalan 9.Mr. S. Baskar 10.Dr. V S Shaisundaram.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

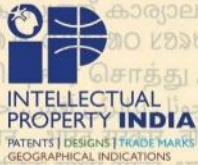
जारी करने की तिथि : 27/09/2023
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 145499



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

388645-001

तारीख / Date

19/06/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **WATER FILTRATION AND COOLING SYSTEM** से संबंधित है, का पंजीकरण, श्रेणी 23-01 में 1.Dr Kumaraswamy J 2. Dr N Beemkumar 3.Dr Subhash Chand 4.Dr V Sampathkumar 5.Mr P Padmalosan 6.Mr Ajay Partap Singh 7.Dr S Gnanam 8.Dr R Pugazhenthii 9.Dr M Chandrasekar 10.Dr S Jacob के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-01 in respect of the application of such design to **WATER FILTRATION AND COOLING SYSTEM** in the name of 1.Dr Kumaraswamy J 2. Dr N Beemkumar 3.Dr Subhash Chand 4.Dr V Sampathkumar 5.Mr P Padmalosan 6.Mr Ajay Partap Singh 7.Dr S Gnanam 8.Dr R Pugazhenthii 9.Dr M Chandrasekar 10.Dr S Jacob.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

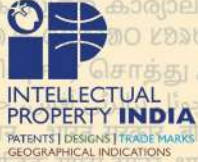
जारी करने की तिथि : 11/10/2023
Date of Issue



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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 154922



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

400782-001

तारीख / Date

28/11/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **DEVICE TO MEASURE SOIL MOISTURE LEVEL** से संबंधित है, का पंजीकरण, श्रेणी 10-04 में 1.Dr Amit Kumar 2. Dr Sampathkumar V 3.Dr D Sendil Kumar 4.Mr Pramod Kumar 5.Abinaya Ishwarya G K 6.Gaurav Nandan 7.Mr S P Gowtham 8.Mr P Jagadeesh 9.Mr V K Vasanth 10.Dr G Sharmilaa 11.Dr P R Kalyana Chakravarthy के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-04 in respect of the application of such design to **DEVICE TO MEASURE SOIL MOISTURE LEVEL** in the name of 1.Dr Amit Kumar 2. Dr Sampathkumar V 3.Dr D Sendil Kumar 4.Mr Pramod Kumar 5.Abinaya Ishwarya G K 6.Gaurav Nandan 7.Mr S P Gowtham 8.Mr P Jagadeesh 9.Mr V K Vasanth 10.Dr G Sharmilaa 11.Dr P R Kalyana Chakravarthy.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 25/01/2024
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 156516



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

333876-001

तारीख / Date

04/10/2020

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **MUFFLER** से संबंधित है, का पंजीकरण, श्रेणी 15-01 में 1.Sathyabama Institute Of Science And Technology 2. Dr. V K Bupesh Raja 3.Dr. B Sheela Rani 4.Dr. V Ganesh Kumar 5.Dr. R Padmapriya 6.Mr. J Baalamurugan 7.Mr. Annipeddi Venkata Ramana Sundar Kasyap 8.Mr. S Krishna Raj 9.Mr. M Deepak Sairam 10.Mr. Akash Mishra 11.Mr. Ritam Das के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-01 in respect of the application of such design to **MUFFLER** in the name of 1.Sathyabama Institute Of Science And Technology 2. Dr. V K Bupesh Raja 3.Dr. B Sheela Rani 4.Dr. V Ganesh Kumar 5.Dr. R Padmapriya 6.Mr. J Baalamurugan 7.Mr. Annipeddi Venkata Ramana Sundar Kasyap 8.Mr. S Krishna Raj 9.Mr. M Deepak Sairam 10.Mr. Akash Mishra 11.Mr. Ritam Das.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 09/02/2024
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 156504



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

402485-001

तारीख / Date

19/12/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **VEGETABLE HARVESTING MACHINE** से संबंधित है, का पंजीकरण, श्रेणी 15-03 में 1.Dr.M.Chandrasekaran 2. Dr.J.Manjunathan 3.Dr.S.Lakshmi Sankar 4.Dr.R.Sudha 5.Dr.S.Durgalakshmi 6.Mr.S.Durai 7.Mr.Vishal Yadav 8.Mr.P.Jagadeesh 9.Dr.Muthuraman V 10.Ms.Annie D 11.Dr.K.Muni Raja Lakshmi के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-03 in respect of the application of such design to **VEGETABLE HARVESTING MACHINE** in the name of 1.Dr.M.Chandrasekaran 2. Dr.J.Manjunathan 3.Dr.S.Lakshmi Sankar 4.Dr.R.Sudha 5.Dr.S.Durgalakshmi 6.Mr.S.Durai 7.Mr.Vishal Yadav 8.Mr.P.Jagadeesh 9.Dr.Muthuraman V 10.Ms.Annie D 11.Dr.K.Muni Raja Lakshmi.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue 09/02/2024



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No. : 152431



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

393541-001

तारीख / Date

24/08/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **TIMER BASED MULTIPURPOSE CIRCUIT BREAKING SOCKET** से संबंधित है, का पंजीकरण, श्रेणी 13-03 में 1.Dr. G. Arunkumar 2. Mr. T. Vidyasagar 3.Mr. K. Phanikumar के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 13-03 in respect of the application of such design to **TIMER BASED MULTIPURPOSE CIRCUIT BREAKING SOCKET** in the name of 1.Dr. G. Arunkumar 2. Mr. T. Vidyasagar 3.Mr. K. Phanikumar.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 05/01/2024
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

Accredited A++ Grade by NAAC | 12B Status by UGC | Approved by AICTE

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School of Allied Health Sciences Department of Medical Laboratory Technology

3.4.3 Number of Patents published/awarded during the year

S. No	Name of the Patentor	Patent Number	Title of the patent	Page No
1	Dr. P Gayathri	202341034751	Method isolation, identification, and characterization of endophytic bacteria	2

FORM 1 THE PATENTS ACT 1970 (39 of 1970) & The Patent Rules, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 & 135, and rule 20(1))		(FOR OFFICE USE ONLY) Application No: Filing Date: Amount of fee paid: CBR No: Signature:	
		Application No.	2023 41034751
		Filing date:	18/05/2023
		Amount of Fee Paid	1750/-
		CBR No.	22503
		Signature	P.V. 18/05/23
1. APPLICANT'S REFERENCE/ IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)			
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]			
Ordinary (✓)		Convention ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
		PCT - NP ()	
		Divisional ()	Patent of Addition ()
3A. APPLICANT(S)			
NAME IN FULL	NATIONALITY	COUNTRY OF RESIDENCE	ADDRESS OF THE APPLICANT
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY	INDIAN EDUCATIONAL INSTITUTION	INDIA	Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, PIN- 600119 Tamil Nādu, India
3B CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]			
Natural Person ()		Other than Natural Person	
		Small Entity ()	Startup ()
		Educational Institution (✓)	
4. INVENTOR(S) [Please tick (✓) at the appropriate category]			
Are all the inventor(s) same as the applicant(s) named above?	Yes ()		No (✓)
If "No", furnish the details of the inventors(s)			
Name in Full	Nationality	Country of Residence	Address for inventor
Gayathri Parameshwaran	INDIAN	INDIA	Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai,

18-May-2023/49675/202341034751/Form 1



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पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

पेटेंट प्रमाण पत्र

Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

491039

आवेदन सं. / Application No.

201941038885

फाइल करने की तारीख / Date of Filing

26/09/2019

पेटेंटी / Patentee

S. KRISHNAKUMAR

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित **ULTRASONIC BONE CONDUCTIVITY HEADPHONE FOR MUFFLED EARS** नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख सितम्बर 2019 के छब्बीसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **ULTRASONIC BONE CONDUCTIVITY HEADPHONE FOR MUFFLED EARS** as disclosed in the above mentioned application for the term of 20 years from the 26th day of September 2019 in accordance with the provisions of the Patents Act, 1970.



(Signature)

Controller of Patents

अनुदान की तारीख : 28/12/2023
Date of Grant :

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, सितम्बर 2021 के छब्बीसवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 26th day of September 2021 and on the same day in every year thereafter.



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PATENTS | DESIGNS | TRADE MARKS
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सत्यमेव जयते



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

पेटेंट प्रमाण पत्र

Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

520986

आवेदन सं. / Application No.

201941038880

फाइल करने की तारीख / Date of Filing

26/09/2019

पेटेंटी / Patentee

J. PREMKUMAR

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित *DESIGN OF PEDIATRIC WRIST BOT FOR UPPER EXTREMITIES* नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख सितम्बर 2019 के छब्बीसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled *DESIGN OF PEDIATRIC WRIST BOT FOR UPPER EXTREMITIES* as disclosed in the above mentioned application for the term of 20 years from the 26th day of September 2019 in accordance with the provisions of the Patents Act, 1970.



इकांत की दस्त

पेटेंट नियंत्रक

Controller of Patents

अनुदान की तारीख : 06/03/2024

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, सितम्बर 2021 के छब्बीसवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 26th day of September 2021 and on the same day in every year thereafter.



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GEOGRAPHICAL INDICATIONS



सत्यमेव जयते



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

पेटेंट प्रमाण पत्र

Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

522139

आवेदन सं. / Application No.

201841043412

फाइल करने की तारीख / Date of Filing

19/11/2018

पेटेंटी / Patentee

1.Dr.T.KARTHIKEYAN 2.Dr.V.S.K.VENKATACHALAPATHY

3.Dr.K.VELMURUGAN 4.Dr.S.JAYAPRAKASH

आविष्कारकों का नाम /Name of Inventor(s)

1.T. KARTHIKEYAN 2.P. JAYA KUMAR

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित *CONCEALED TYPE FIRE EXTINGUISHER WITH VERTICAL AND HORIZONTAL MOVEMENT OF NOZZLE WITH UMBRELLA* नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख नवम्बर 2018 के उन्नीसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुवत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled *CONCEALED TYPE FIRE EXTINGUISHER WITH VERTICAL AND HORIZONTAL MOVEMENT OF NOZZLE WITH UMBRELLA* as disclosed in the above mentioned application for the term of 20 years from the 19th day of November 2018 in accordance with the provisions of the Patents Act, 1970.



अनुदान की तारीख : 08/03/2024
Date of Grant :

उन्नत की पंक्ति
पेटेंट नियंत्रक

Controller of Patents

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, नवम्बर 2020 के उन्नीसवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।

Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 19th day of November 2020 and on the

same day in every year thereafter. बौद्धिक संपदा दफ्तर, भारत सरकार, बौद्धिक सम्पदा कार्यालय, भारत सरकार, बौद्धिक अंश कंसेप्ट, भारत सरकार.

पेटेंट कार्यालय का एक प्रकाशन PUBLICATION OF THE PATENT OFFICE

The Patent Office Journal No. 40/2023 Dated 06/10/2023

6612

 		ORIGINAL क्रम सं/ Serial No.: 145014
पेटेंट कार्यालय, भारत सरकार The Patent Office, Government Of India		
डिजाइन के पंजीकरण का प्रमाण पत्र Certificate of Registration of Design		
डिजाइन सं. / Design No.	384105-001	
तारीख / Date	17/04/2023	
पारस्परिकता तारीख / Reciprocity Date*		
देश / Country		
प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो THERMAL IMAGING CAMERA FOR AGRICULTURAL FIELD से संबंधित है, का पंजीकरण, श्रेणी 16-01 में 1.Mr. R. Karthickmanoj 2. Mr. P. Murali 3.Mrs. Ramya.D 4.Mr. A. Abdul Hayum के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।		
Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 16-01 in respect of the application of such design to THERMAL IMAGING CAMERA FOR AGRICULTURAL FIELD in the name of 1.Mr. R. Karthickmanoj 2. Mr. P. Murali 3.Mrs. Ramya.D 4.Mr. A. Abdul Hayum.		
डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.		
जारी करने की तिथि Date of Issue	05/10/2023  महानिदेशक पेटेंट-डिजाइन और व्यापार चिह्न Controller General of Patents, Designs and Trade Marks	
*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है। The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.		

Design Number	384105-001
Class	16-01
1.Mr. R. KARTHICKMANOJ ASSISTANT PROFESSOR, DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING ACADEMY OF MARITIME	





Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India



Application Details	
APPLICATION NUMBER	2022/1022934
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	19/04/2022
APPLICANT NAME	1 . Mr. V. SENTHIL NAYAGAM 2 . Mr. S. ANUSH 3 . Mr. TELFERD JUDE NICHOLAS HAWES
TITLE OF INVENTION	SOLAR POWERED MOSQUITO POWER GUARD
FIELD OF INVENTION	CIVIL
E-MAIL (As Per Record)	
ADDITIONAL EMAIL (As Per Record)	sensribala123@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	20/10/2023
Application Status	
APPLICATION STATUS	Awaiting Request for Examination



Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India



Application Details

APPLICATION NUMBER	202141050441
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	03/11/2021
APPLICANT NAME	G.T. Sudar Rajan
TITLE OF INVENTION	LANDSMAN CONVERTER BASED GRID CONNECTED HOME ENERGY MANAGEMENT SYSTEM
FIELD OF INVENTION	ELECTRICAL
E-MAIL (As Per Record)	
ADDITIONAL EMAIL (As Per Record)	gts75@rediffmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	05/05/2023

Application Status

APPLICATION STATUS	Awaiting Request for Examination
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Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India



Application Details

APPLICATION NUMBER	202241076156
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	28/12/2022
APPLICANT NAME	Dr. M. KAVITHA
TITLE OF INVENTION	TEXT TO BRAILLE CONVERTING COMMUNICATION DEVICE FOR THE VISUAL AND HEARING-CHALLENGED PERSONS
FIELD OF INVENTION	PHYSICS
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	kaveem@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	05/07/2024

Application Status

APPLICATION STATUS	Awaiting Request for Examination
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Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details

APPLICATION NUMBER	202241037946
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	01/07/2022
APPLICANT NAME	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
TITLE OF INVENTION	A DEVICE FOR CONVERTING BIO WASTE INTO ENERGY
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	info@humcen.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	01/07/2022
PUBLICATION DATE (U/S 11A)	08/07/2022
FIRST EXAMINATION REPORT DATE	13/10/2022
Date Of Certificate Issue	15/01/2024
POST GRANT JOURNAL DATE	19/01/2024
REPLY TO FER DATE	12/04/2023

Application Status

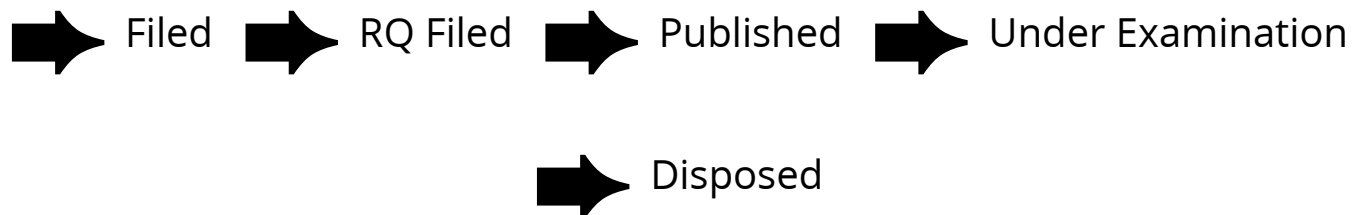
APPLICATION STATUS

**Granted Application, Patent Number
:499120**

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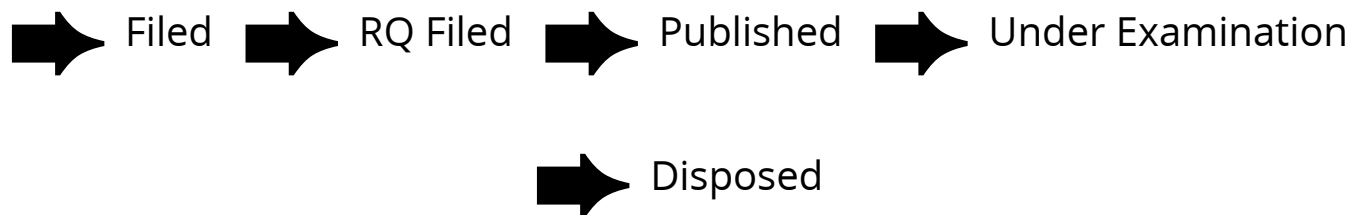
Application Details

APPLICATION NUMBER	202341032333
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	08/05/2023
APPLICANT NAME	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
TITLE OF INVENTION	"DRONE FOR USE IN AGRICULTURAL APPLICATIONS"
FIELD OF INVENTION	ELECTRICAL
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	info@humcen.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	08/05/2023
PUBLICATION DATE (U/S 11A)	16/06/2023

Application Status

APPLICATION STATUS	Application referred u/s 12 for examination.
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Feedback (<https://ipindiaonline.gov.in/feedback>) Sitemap (<http://ipindia.nic.in/itemap.htm>) Contact Us (<http://ipindia.nic.in/contact-us.htm>) Help Line (<http://ipindia.nic.in/helpline-page.htm>)

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Patent Search

Invention Title	DUAL-AXIS SOLAR TRACKING SYSTEM		
Publication Number	27/2022		
Publication Date	08/07/2022		
Publication Type	INA		
Application Number	202241037947		
Application Filing Date	01/07/2022		
Priority Number			
Priority Country			
Priority Date			
Field Of Invention	PHYSICS		
Classification (IPC)	H02S0020320000, H01L0031054000, F24S0030000000, H02J0007350000, B25J0009160000		
Inventor			
Name	Address		Country
M. KAVITHA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, CHENNAI, 600119, TAMILNADU, INDIA.		India
Applicant			
Name		Address	Cou
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY		RAJIV GANDHI SALAI, OMR ROAD, JEPPIAAR NAGAR, CHENNAI-600119	Indi

Abstract:

Accordingly, embodiments herein disclose a dual-axis solar tracking system (100) for collecting maximum rays using light-dependent resistors (LDRs), comprising a rectangular box; a plurality of servo motors (104), a solar panel (101) interfaced with the plurality of servo motors (104). The solar panel (101) is configured to receive light from the sun to get electricity through photovoltaic effects. The system (100) may include a charge controller (105) interfaced with the solar panel (101); and an Arduino controller (102) interfaced with the plurality of servo motors (104) such that instructions are received from the Arduino controller (102) to the plurality of servo motors (104) providing movement to the solar panel (101). The system (100) may include LDRs (103) interfaced with the Arduino controller (102). The LDRs (103) detect photovoltaic analog signals such that the analog information is transferred from the LDRs (103) to the Arduino controller (102). Figure to be published with Abstract: Figure

Complete Specification**FIELD OF INVENTION**

[0001] The present disclosure relates to the field of solar system and more particularly, to a dual-axis solar tracking system for collecting maximum rays using light-dependent resistors (LDRs). Still, more particularly, to the present system is to solve the problem by providing an arrangement for a solar panel to track the sun on both axes.

BACKGROUND OF INVENTION

[0002] Nowadays the depletion of conventional energy resources forced many researchers to search for various renewable energy sources. Among the non-conventional resources available, solar energy has the greatest potential to be converted into electrical energy. Converting solar energy into electrical energy signifies one of the most favorable technologies, providing dirt-free, dependable with negligible environmental impact. The solar energy is well known as an unrestricted, endless source which involves no pollution, filtrates or greenhouse gases emission.

[0003] Typically, the solar photovoltaic industry has been improving very well recently. Most of the currently installed PV systems are of the fixed-tilt type, which the PV modules are tilted at an optimal angle. For this type, these PV modules are reduced to severe cosine losses during harnessing of solar energy early in the morning, and in the late evening. This project employs a sun-tracking solar panel to track the maximum rays using light-dependent resistors (LDRs) which is more acceptable when compared to the light-sensing method that may not be accurate. The main aim of this work is to design a system that could track the sun with a more efficient way compared to the existing system. This is obtained by coupling the LDR sensors with a DC servo motor to the solar panel such that the solar panel maintains its face always perpendicular to the sun to generate maximum energy. This is achieved by employing a programmed ARDUINO CONTROLLER IC.

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Page last updated on: 26/06/2019

FORM 2

THE PATENTS ACT, 1970
(39 of 1970)

&

The Patent Rules, 2003

COMPLETE SPECIFICATION

(See section 10 and rule 13)

TITLE OF THE INVENTION

**“THE INFLUENCE OF CUSTOMER PERFORMANCE COMMITMENT ON THE
APPRAISAL OF PRODUCT QUALITY BY CUSTOMERS”**

We, applicant(s)

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The following specification particularly describes the nature of the invention and the manner in which it is performed

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Patent Search

Invention Title	IOT BASED SMART BABY CRADLE SYSTEM WITH AUTOMATED STEREO SYSTEM
Publication Number	20/2024
Publication Date	17/05/2024
Publication Type	INA
Application Number	202441037466
Application Filing Date	13/05/2024
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	MECHANICAL ENGINEERING
Classification (IPC)	A47D0009020000, A61B0005000000, A47D0009000000, B62B0009220000, A47D0015000000

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Applicant

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LOHAR KARISHMA DILIP	Student-School of Science and Humanities, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, JEPPIAAR NAGAR, CHENNAI, TAMILNADU, INDIA-600119.	India	Indi

Abstract:

IOT BASED SMART BABY CRADLE SYSTEM WITH AUTOMATED STEREO SYSTEM. Smart baby cradle system is an innovative IOT based project that aims to provide a more efficient way to take care of infants. This system utilizes various IOT components, such as MEMS sensor, Moisture sensor, MIC sensor, DHT II sensor, servo motor and Arduino UNO microcontroller, to monitor and control the infant's environment. For example, it can scan the baby's temperature, humidity, movements, bed wetting, crying and alert the or caretakers through a remote server using an ESP8266 wifi module in case of any abnormalities. The automated swing system will take care of the rocking motion of the and the automated music system can provide soothing sounds and voice recordings to help the baby fall asleep. Working parents cannot always take care of their babies. Smart based baby monitoring and automated swing and music system which can monitor the baby's condition in real time, has been proposed to solve these problems.

Complete Specification

4. DESCRIPTION

BACKGROUND OF THE INVENTION

Modern baby cradle systems often integrate various technologies to provide convenience, safety, and comfort for both babies and parents. Some of the present technologies involved in baby cradle systems include:

Motorized Rocking Mechanisms: Many baby cradles now come with motorized rocking mechanisms that mimic the soothing motion of being rocked in a caregiver's arms. These can be powered by batteries or electricity.

Sensors and Monitoring Systems: Some advanced baby cradle systems include sensors to monitor the baby's movements, temperature, and even heart rate. These sensors can provide alerts to parents if any abnormal activity is detected.

Mobile Apps and Connectivity: Several baby cradle systems offer integration with mobile apps, allowing parents to control features such as rocking speed, music, and vibration remotely. Some apps also provide data tracking and analysis features.

Safety Features: Safety is a paramount concern in baby products. Many baby cradles now

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3.4.3 Number of Patents published/awarded during the year

3.4.3.1: Total number of Patents published/awarded year wise during the year

पेटेंट कार्यालया
शासकीय जर्ना

OFFICIAL JOURNAL
OF
THE PATENT OFFICE

नम सं. 24/2023

शक्र वार

: 16/06/2023

दि

रुाक

ISSUE NO. 24/2023

FRIDAY

DATE: 16/06/2023

पेटेंट कार्यालय का एक प्रकाश
PUBLICATION OF THE PATENT
OFFICE

The Patent Office Journal No. 24/2023 Dated 16/06/2023

42574

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341037324 A

(19) INDIA

(22) Date of filing of Application :30/05/2023

(43) Publication Date : 16/06/2023

(54) Title of the invention : BONE BIOMATERIAL COMPOSITE OF ETHANOLIC LEAVES EXTRACT OF ORMOCARPUM COCHINCHINENSE (OC- ELUMBU OOTI) WITH BIPHASIC CALCIUM PHOSPHATE, CHITOSAN AND CASEIN IN THE TREATMENT OF INTRABONY DEFECTS

(51) International classification :A61C 080000, A61K 317220, A61L 271200, A61L 274200, A61L 275400 (86) International Application No :PCT// :01/01/1900 Filing Date : NA (87) International Publication No :NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number Filing Date		(71)Name of Applicant : 1)Dr. GAYATHRI S, MDS Address of Applicant :Research Scholar, Department of Periodontics Dr M.G.R Educational and Research Institute, Chennai -95 Associate Professor, Department of Periodontics Sathyabama Dental College and Hospital, Chennai 600119 ----- 2)Dr. UMA SUDHAKAR, MDS, Ph. D Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. GAYATHRI S, MDS Address of Applicant :Research Scholar, Department of Periodontics Dr M.G.R Educational and Research Institute, Chennai -95 Associate Professor, Department of Periodontics Sathyabama Dental College and Hospital, Chennai 600119 -----
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(57) Abstract :

2)Dr. UMA SUDHAKAR, MDS, Ph. D

Address of Applicant :Vice-Principal, Professor and HOD, Department of Periodontics, Thai Moogambigai Dental College and Hospital, Chennai-600107 -----

ABSTRACT BONE BIOMATERIAL COMPOSITE OF ETHANOLIC LEAVES EXTRACT OF
ORMOCARPUM COCHINCHINENSE (OC- ELUMBU OOTI) WITH BIPHASIC CALCIUM
PHOSPHATE, CHITOSAN AND CASEIN IN THE

TREATMENT OF INTRABONY DEFECTS Bone biomaterials are used to restore the osseous defects that occur due to pathological diseases like systemic and dental diseases (Periodontal osseous defects), developmental malformations, cysts and tumors. Osseous imperfections that are not critical in size would spontaneously mend. The defects that are larger in size require surgical intervention which includes the use of Bone biomaterials like bone grafts. Autografts though are the best replacement for filling osseous defects they have limitations like second surgical site morbidity and the scarcity of grafts. Synthetic grafts are exceedingly expensive, require time-consuming processes for production, and are immune-rejected. These reasons have forced researchers to look for alternatives to restore bone defects. This invention has created a novel bone biomaterial made of ethanolic leaves extract of Ormocarpum cochinchinense (OC) also known as Elumbu-ooti in the local language along with biphasic calcium phosphate, chitosan and casein has shown excellent results in In-vitro cell culture study with adhesion, viability and proliferation capacity. Ossification was evident in surgically created osseous defects in the femur bone of Albino Wistar rats. This invention can be created at a low cost and is cost-effective and since Ormocarpum cochinchinense leaves are obtained from natural resources, the leaves are available in unlimited supply. The leaves of Ormocarpum cochinchinense ethanolic extract has also shown good in-vitro antioxidant and in-vitro anti-inflammatory properties. The unique properties of these bioactive phytochemicals as bone grafts could aid in the bone modelling process in biomedical and dental-surgical research.

No. of Pages : 13 No. of Claims : 10

The Patent Office Journal No. 24/2023 Dated
16/06/2023

43289



ORIGINAL

क्रम सं/ Serial No.: 168166



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

411511-001

तारीख / Date

25/03/2024

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन को **ARTIFICIAL INTELLIGENCE POWERED ROBOT FOR HOME ASSISTANCE** से संबंधित है, का पंजीकरण, श्रेणी 15-99 में 1.J. Jayapriya 2. D. Muruganandam 3.Arjun Vijay के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-99 in respect of the application of such design to **ARTIFICIAL INTELLIGENCE POWERED ROBOT FOR HOME ASSISTANCE** in the name of 1.J. Jayapriya 2. D. Muruganandam 3.Arjun Vijay.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue 03/05/2024



डिजाइन की पंजीकरण
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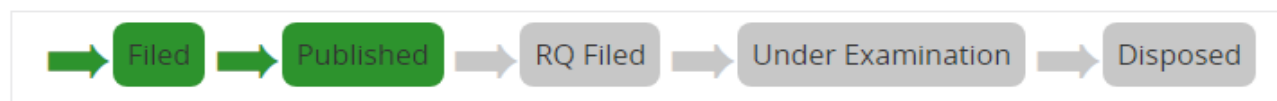
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Ministry of Commerce & Industry,
Government of India



Application Details	
APPLICATION NUMBER	202341064057
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	24/09/2023
APPLICANT NAME	1 . Dr. M. Sumathi 2 . Dr. Nellore Manoj Kumar 3 . Mr. K. Sankar 4 . Dr. R. Ramesh 5 . Dr. Chetna Sinha 6 . Dr. M. Mallika 7 . Dr. N. Balambigai 8 . Dr. Kakanuti Malleswari 9 . Dr. Konduru Venkateswara Raju 10 . Mr. T. Ravi Babu
TITLE OF INVENTION	MATHEMATICAL MODELLING OF BUBBLY FLOW SURFACE INTERACTIONS IN MULTIPHASE SYSTEMS
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	03mrmanoj@gmail.com
ADDITIONAL-EMAIL (As Per Record)	03mrmanoj@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	06/10/2023

Application Status	
APPLICATION STATUS	Awaiting Request for Examination

			View Documents
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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341075576 A

(19) INDIA

(22) Date of filing of Application :06/11/2023

(43) Publication Date : 17/11/2023

(54) Title of the invention : METHOD FOR PRODUCTION OF BIO - DIESEL FROM MESUA FERREA LINN KERNEL OIL

(51) International classification :A61K0036185000, A61K0036380000, A61K0036480000, A61P0031000000, A61K0008920000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY Address of Applicant :JEPPIAAR NAGAR, RAJIV GANDHI ROAD, CHENNAI - 600119 TAMILNADU ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.M.Karthikeyan Address of Applicant :SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY , JEPPIAAR NAGAR, RAJIV GANDHI ROAD, CHENNAI - 600119 TAMILNADU ----- ----- 2)Dr.S.Sathish Address of Applicant :Associate Professor, Department of Chemical Engineering, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar= Chennai, Tamil Nadu, India PIN- 600119 ----- 3)Dr.Michael Rahul Soosai Address of Applicant :Assistant Professor, Department of Chemical Engineering, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India, PIN 600119 ----- 4)Dr.D.Prabu Address of Applicant :Associate Professor, Department of Chemical Engineering, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India, PIN- 600119 ----- 5)Dr.A.Annam Renita Address of Applicant :Professor, Department of Chemical Engineering, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India, PIN- 600119 -----
---	--

(57) Abstract :

OFFICE CHENNAI 08/11f2823 09 ABSTRACT METHOD FOR PRODUCTION OF BIO-DIESEL FROM MESUA FERREA LINN KERNEL OIL Accordingly, embodiment herein disclosure a method for production of bio-diesel from mesua ferrea linn keme] oil using potassium carbonate/Alumina as a catalyst. The method involves precluding a modified glumina with alkaline properties through the process of wet impregnation using an aqueous potassium carbonate solution and alumina as a supporting material. Followed by, stirring continuously the mixture solution on a magnetic stirrer at room temperature for 24 hours. Further, the proposed method may involve separating the solid product from the liquid by filtration using a vacuum filter system, and drying the solid product in an oven set at 110°C for a period of 12 hours. Followed by, obtaining the dried solid material from this process underwent calcification in a muffle furnace at 400°C for 4 hours. Additionally, the proposed method may involve monitoring soap formation by the FTIR-ATR process during the bio-diesel production reaction.

No. of Pages : 21 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341075534 A

(19) INDIA

(22) Date of filing of Application :06/11/2023

(43) Publication Date : 17/11/2023

(54) Title of the invention : METHOD FOR MONITORING DURABILITY AND AGEING OF COLOURED GLASS USING SEALANTS

(51) International classification :G01N0017000000, C04B0041000000, G05D0001020000, G01N0033240000, G01N0003560000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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Address of Applicant :Associate Professor, Department of Chemical Engineering, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India, PIN- 6001 19 -----

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Address of Applicant :Assistant Professor, Department of Chemical Engineering Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India, PIN- 600119 -----

(57) Abstract :

Accordingly, embodiments herein disclose a method for monitoring durability and ageing of coloured glass using sealants. The method involves positioning a stretch film on a work surface and maintaining test substrate's position on the work surface. Followed by, opening a bottle of sealant to conduct the experiment, keeping a Teflon model on the coated glass back, and applying the sealants on the test surface. Further the proposed method may involve making a baseline color representation measurement with a colour spectrophotometer in a room with high humidity levels. Followed by, maintaining two sets of samples where, one under laboratory conditions and the other under high-humidity environments. The distilled water is employed to wash those condition samples after being removed from the humid environment. Additionally, the proposed method may involve placing the thickness gauge in place on a scuffed mirror, and measuring the test sample's thickness after it has been placed.

No. of Pages : 11 No. of Claims : 6



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सत्यमेव जयते

क्रम सं/SL No :044163434



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

पेटेंट प्रमाण पत्र

Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

462008

आवेदन सं. / Application No.

202041048435

फाइल करने की तारीख / Date of Filing

05/11/2020

पेटेंटी / Patentee

1.Dr. S. Sathish 2.Dr. D. Prabu 3.Dr. J. Aravind Kumar 4.Dr. D. Venkatesan

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकरित **AMALGAMATION OF NANO CHITOSAN AND ADSORBENT APPLICATION PROCESS FOR THE REMOVAL OF REACTIVE DYE** नामक आविष्कार के लिए,

पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख नवम्बर 2020 के पांचवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **AMALGAMATION OF NANO CHITOSAN AND ADSORBENT APPLICATION PROCESS FOR THE REMOVAL OF REACTIVE DYE** as disclosed in the above mentioned application for the term of 20 years from the 5th day of November 2020 in accordance with the provisions of the Patents Act, 1970.



अनुदान की तारीख : 25/10/2023

Date of Grant :

Controller of Patents

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, नवम्बर 2022 के पांचवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।

Note - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 5th day of November 2022 and on the same day in every year thereafter.

*चूंकि पेटेंटी व आविष्कारकों की संख्या अधिक है, पेटेंटी व आविष्कारकों के नाम पृष्ठ संख्या 2 पर जारी हैं।

*Since the Number of Patentees / Inventors is more, the name of Patentees / Inventors are continued on Page No. 2



Federal Republic Of Germany



Certificate

On the registration of utility model No.
20 2023 105 347

Name:

A Papaya-Latex-based nano-agent carrier

IPC:

A61K

Owner:

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Visvanathan, Sridevi, Madurai, Tamil Nadu, IN

Date of registration:

14.09.2023

Date of registration:

16.10.2023

The President of the German Patent and trademark Office



Eva Schewior

Munich, 16.10.2023

MARKET

The requirements of the Shu •ability are used when registering a Utility model not checked for current legal status and scope of protection see Please contact the DPMA register at www.dpma.de



ORIGINAL

क्रम सं/ Serial No.: 155726



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

364298-001

तारीख / Date

17/05/2022

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **HYPERSONIC GLIDE VEHICLE** से संबंधित है, का पंजीकरण, श्रेणी 12-07 में 1.Sakshar Ghosh 2. Shailesh 3.Madhan Kumar G 4.Manigandan S 5.Mr. Venkatesh. S 6.Mr. P. Gunasekar के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 12-07 in respect of the application of such design to **HYPERSONIC GLIDE VEHICLE** in the name of 1.Sakshar Ghosh 2. Shailesh 3.Madhan Kumar G 4.Manigandan S 5.Mr. Venkatesh. S 6.Mr. P. Gunasekar.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 02/02/2024
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 166170



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

364297-001

तारीख / Date

17/05/2022

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो MEDUSA से संबंधित है, का पंजीकरण, श्रेणी 22-01 में 1.Mr. Gabriel Hosea Doss K 2. Ms. Infant Rainia L 3.Mr. G. Madhan Kumar 4.Dr. S. Manigandan 5.Mr. S. Venkatesh 6.Mr. P. Gunasekar के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 22-01 in respect of the application of such design to MEDUSA in the name of 1.Mr. Gabriel Hosea Doss K 2. Ms. Infant Rainia L 3.Mr. G. Madhan Kumar 4.Dr. S. Manigandan 5.Mr. S. Venkatesh 6.Mr. P. Gunasekar.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्वधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :

Date of Issue

26/04/2024



कृपया ध्यान दें
नियंत्रक

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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 140584



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

383649-001

तारीख / Date

11/04/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो IOT-BASED AUTOMATIC DEFROSTING CHAMBER IN A REFRIGERATOR से संबंधित है, का पंजीकरण, श्रेणी 23-04 में 1.R Siva 2. S Venkatesh 3.Ks Salamon Arockiaraj 4.Deepak Srinivas V के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 23-04 in respect of the application of such design to IOT-BASED AUTOMATIC DEFROSTING CHAMBER IN A REFRIGERATOR in the name of 1.R Siva 2. S Venkatesh 3.Ks Salamon Arockiaraj 4.Deepak Srinivas V.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 13/07/2023
Date of Issue



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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



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GEOGRAPHICAL INDICATIONS



ORIGINAL

क्रम सं/ Serial No. : 138997



सत्यमेव जयते

पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

382141-001

तारीख / Date

23/03/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **MULTI-SENSOR SYSTEM-BASED REAL-TIME SORTING MODULAR ROBOT WITH MACHINE LEARNING ALGORITHM** से संबंधित है, का पंजीकरण, श्रेणी 10-05 में 1.Dr. R. B. Durairaj 2. Mr. S. Venkatesh 3.Dr. S. Karthikeyan 4.Dr. Sivasaravanan 5.Mr. P. Niranjan 6.Mr. V. Krishna Subbaiah के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-05 in respect of the application of such design to **MULTI-SENSOR SYSTEM-BASED REAL-TIME SORTING MODULAR ROBOT WITH MACHINE LEARNING ALGORITHM** in the name of 1.Dr. R. B. Durairaj 2. Mr. S. Venkatesh 3.Dr. S. Karthikeyan 4.Dr. Sivasaravanan 5.Mr. P. Niranjan 6.Mr. V. Krishna Subbaiah.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

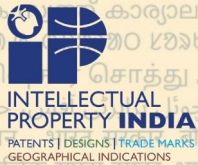
जारी करने की तिथि :
Date of Issue : 07/06/2023



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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 146124



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

364299-001

तारीख / Date

17/05/2022

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **SMART MATERIAL BASED CUBE SATELLITE OUTER SHELL FOR HIGH TEMPERATURE CONDITIONS** से संबंधित है, का पंजीकरण, श्रेणी 12-07 में 1.Mr. P. Gunasekar 2. Dr. S. Manigandan 3.Dr. S. Venkatesh 4.Mr. R. Gokulnath 5.Konchada Uday Kumar 6.Yaparala Mallesh Babu के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 12-07 in respect of the application of such design to **SMART MATERIAL BASED CUBE SATELLITE OUTER SHELL FOR HIGH TEMPERATURE CONDITIONS** in the name of 1.Mr. P. Gunasekar 2. Dr. S. Manigandan 3.Dr. S. Venkatesh 4.Mr. R. Gokulnath 5.Konchada Uday Kumar 6.Yaparala Mallesh Babu.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue 17/10/2023



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*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

क्रम सं/ Serial No.: 162146



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

401668-001

तारीख / Date

08/12/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **SOLAR PYROLYZER MACHINE** से संबंधित है, का पंजीकरण, श्रेणी 15-99 में **1.Dr. A.Anderson** 2. Dr Amudhavalli Victor के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-99 in respect of the application of such design to **SOLAR PYROLYZER MACHINE** in the name of **1.Dr. A.Anderson** 2. Dr Amudhavalli Victor.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :

Date of Issue

28/03/2024



कुलत की पंक्ति

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/11/2023

(21) Application No.202341075531 A

(43) Publication Date : 24/11/2023

(54) Title of the invention : METHOD FOR SYNTHESIZING AND CHARACTERISING OF A NOVEL CHITOSAN-SELENIUM NANOFLOWER

(51) International classification	:H01L0033500000, B22F0009240000, B82Y0040000000, G01N0027327000, H01S0005068300	(71)Name of Applicant : 1)SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGYSATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY Address of Applicant :DR.T.SASIPRABA, VICE CHANCELLOR, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, JEPPIAAR NAGAR, RAJIV GANDHI ROAD, CHENNAI-600119, TAMILNADU, INDIA. 8124281241 info@humcen.com -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor : 1)Dr. STALIN DHAS T Address of Applicant :CENTRE FOR OCEAN RESEARCH (DST-FIST SPONSORED CENTRE), MOES-EARTH SCIENCE & TECHNOLOGY CELL, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, JEPPIAAR NAGAR, RAJIV GANDHI ROAD, CHENNAI-600119, -----
(61) Patent of Addition to Application Number	:NA	2)SOWMIYA P Address of Applicant :Centre for Ocean Research (DST - FIST Sponsored Centre), MoES-Earth Science & Technology Cell, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, _India PIN-6001 19 - -----
Filing Date	:NA	3)INBAKANDAN D Address of Applicant :Centre for Ocean Research (DST - FIST Sponsored Centre), MoES-Earth Science & Technology Cell, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India PIN- 600119 -- -----
(62) Divisional to Application Number	:NA	4)B. SHEELA RANI Address of Applicant :Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chehnai, Tamil Nadu, India, PIN- 600119 -----
Filing Date	:NA	

(57) Abstract :

Accordingly, embodiment herein disclosed a method for synthesizing and characterizing of a novel chitosan;selenium nano flower The method involves preparing 0.01 M Na₂SeO₃ solution by homogeneously Dissolving Na₂SeO₃ in distilled water, zind preparing a 0.5% w/v chitosan solution by dissolving chitosan in 1% v/v acetic acid. The prepared Na₂SeO₃ and chitosan solutions were mixed in equal volumes and stirred until homogeneity under dark conditions. Further, the proposed method may involve adding 0.01 M ascorbic acid solution in dark condition under constant stirring at room temperature. The color change from clear to bright orange indicates the reduction of Se salt to Se nanoparticles, and the solution is centrifuged at 9300 G for 10 min and dried in a vacuum oven at 50 C.

No. of Pages : 10 No. of Claims : 3

(54) Title of the invention : METHOD OF FORMULATING EPOXY RESIN NANOCOMPOSITIES WITH ANTIFOULING PROPERTIES

(51) International classification :C09D0005160000, B32B0005020000, A01N0037440000, C09D0007650000, B01D0065080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Sathyabama institute of science and technology Address of Applicant :SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, RAJIV GANDHI SALAI, JEPPIAAR NAGAR, CHENNAI, TAMIL NADU, INDIA-600119. inbakandan@gmail.com registrar@sathyabama.ac.in 9965540310 ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. D. Inbakandan Address of Applicant :Head, Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119 ----- 2)Dr. B. Sheela Rani Address of Applicant :Director (Research), Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119 ----- 3)Clarita Clements Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119 ----- 4)S. Manikandan Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India - 600119 -----
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(57) Abstract :

Abstract: The present invention discloses a novel epoxy-nanocomposite resin formulation designed specifically for antifouling applications. The invention encompasses a comprehensive approach, involving the formulation of a specialized epoxy-based resin, the development of an efficient coating process, and extensive antifouling studies to evaluate its performance. The epoxy-nanocomposite resin is synthesized by incorporating carefully selected nanomaterials known for their antifouling properties. The formulation not only ensures enhanced mechanical and chemical properties of the resin but also imparts superior resistance to fouling organisms. The tailored resin composition exhibits improved adhesion to various substrates, providing a durable and long-lasting antifouling solution. The invention encompasses techniques to optimize the coating thickness, ensuring maximum effectiveness against fouling organisms while minimizing environmental impact. To validate the antifouling efficacy of the developed resin, extensive studies are conducted under various environmental conditions. The antifouling performance is evaluated through controlled laboratory experiments as well as real-world applications. The results demonstrate the significant reduction in fouling attachment, prolonged antifouling activity, and increased operational efficiency of coated surfaces. This patent brings forth a comprehensive solution for combating fouling in diverse applications, from marine infrastructure to industrial equipment, offering a sustainable and effective alternative to traditional antifouling methods. The disclosed epoxy-nanocomposite resin formulation, coating process, and antifouling studies collectively represent a groundbreaking advancement in the field of antifouling technology.

No. of Pages : 14 No. of Claims : 7

(54) Title of the invention : METHOD OF FORMULATING NANO-BASED PAINT WITH ANTIFOULING PROPERTIES

(51) International classification :C09D0005160000, B63B0059040000, B01D0065080000, C09D0007400000, B63B0059080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY Address of Applicant :Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, PIN-600 119 ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. D.Inbakandan Address of Applicant :Head, Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India —600 119. ---- ----- 2)Dr. B. Sheela Rani Address of Applicant :Director (Research), Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600 119. ----- 3)T. Naren Kumar Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India —600 119 ----- 4)C. Anu Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, , Jeppiaar,Nagar, Chennai,Tamil Nadu, India —600 119 ----- -----
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(57) Abstract :
Marine fouling, characterized by the accumulation of unwanted organisms poses significant on ship hulls, challenges to the maritime industry, leading to increased fuel consumption and maintenance costs. In response to this issue, a novel method for formulating nano-based paint with advance antifouling properties has been developed. This patent focuses on enhancing the efficacy of antifouling coatings through the incorporation of nanoparticles in different concentration within a paint matrix, optimizing their composition and concentration for good antifouling performance. The study investigates the influcncc of nanoparticles such as metal oxides on the prevention of biofouling. Additionally, the research explores the impact of these nanomaterials on paint durability, adhesion, and overall coating integrity in harsh marine environments. Experimental results demonstrate the successful development of a nano-based paint exhibiting enhanced antifouling properties compared to traditional coatings. The formulated paint effectively inhibits the adhesion and growth of marine organisms, providing a durable and long-lasting solution for biofouling prevention. The antifouling efficacy is evaluated through comprehensive laboratory tests and real-world field trials. The proposed nano-based paint formulation method presents a promising avenue for the maritime industry to reduce fuel consumption, lower maintenance costs, and adhere to evolving environmental standards.

No. of Pages : 13 No. of Claims : 8

(54) Title of the invention : SILANE-POLYMER MEDIATED NANOCOMPOSITES FOR ANTIFOULING APPLICATION AND ITS METHOD OF PREPARATION THE

(51) International classification :C09D0005160000, C12M0001340000, B82Y0015000000, B63B0059040000, C02F0001500000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Sathyabama institute of science and technology Address of Applicant :Dr. S. S. Rao Postal address Registrar, REGISTRAR, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, RAJIV GANDHI SALAI, JEPPIAAR NAGAR, CHENNAI, TAMIL NADU, INDIA - 600 119. 9965540310, registrar@sathyabama.ac.in, inbakandan@gmail.com ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. D. Inbakandan Address of Applicant :Head, Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119 ----- 2)Dr. B. Sheela Rani Address of Applicant :Director (Research), Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119 ----- 3)Ms. Clarita Clements Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600 119 ----- 4)Mr. S. Manikandan Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119 -----
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(57) Abstract :

Abstract: Silane-polymer mediated nanocomposites for antifouling application and its method of preparation thereof PDMS nanocomposites have emerged as a promising material for biofouling control in diverse applications. This method investigates the efficacy of PDMS nanocomposites in preventing biofouling, utilizing a tailored approach through the incorporation of nanoparticles. They are formulated to harness the synergistic effects and provide surface properties. The present study explores the influence of nanoparticle composition on Biofouling resistance, surface wettability and mechanical strength. The PDMS nanocomposites were characterized by ATR-FTIR, TGA, and Contact angle. Lab-scale bacterial and diatom adhesion assays were performed by microscopic observation using different staining techniques, biofilm-associated EPS quantification, cell counting, and surface wettability at 48, 72, and 96h. The antifouling performance were evaluated by exposing the coated surfaces to an open sea environment for 100 days. A multivariate statistical analysis was performed to understand the correlation between different biofouling communities and water parameters. In the lab scale study, mixed NPs incorporated PDMS coating (1.5%) revealed minimum bacterial and diatom adhesion along with less surface wettability. In in-situ conditions, the percentage area covered by fouling organisms exhibited a maximum coverage on control surfaces and a minimum on mixed NPs incorporated PDMS coating (1.5%) with bamacles and tubeworms as a significant fouling community followed by the green mussel. The biocompatibility and low toxicity of PDMS, combined with the tailored properties imparted by nanoparticles, position these nanocomposites as environmentally friendly and sustainable solutions for biofouling mitigation.

No. of Pages : 13 No. of Claims : 9

(54) Title of the invention : FORMULATING PHAGE INCORPORATED POLYMERIC SURFACES WITH MARINE ANTIBIOFILM PROPERTIES

(51) International classification :C12N0007000000, C09D0005160000, G01N0017000000, A61K0035760000, A01N0059000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Sathyabama institute of science and technology Address of Applicant :Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, PIN-600 119 ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. D.Inbakandan Address of Applicant :Head, Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119 ----- 2)Dr. B. Sheela Rani Address of Applicant :Director (Research), Qathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600 119. ----- 3)S. Lakshminarayanan Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119. ----- 4)C. Anu Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai,Jeppiaar Nagar, Chennai, Tamil Nadu, India - 600119. ----- 5)V. Jeevitha Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai; Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119 -----
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(57) Abstract :
Marine biofouling, characterized by the formation of persistent biofilms on submerged surfaces, poses significant challenges to various industries. This research focuses on an innovative approach to tackle biofouling by formulating polymeric surfaces incorporated with bacteriophages, aiming to prevent and mitigate biofilm formation in marine environments. Bacteriophages, viruses that specifically target bacteria, offer a unique and targeted antibacterial solution. The study explores the development of phageincorporated polymeric surfaces through a carefully designed Formulation process. Bacteriophages, selected based on their effectiveness against marine bacteria, are integrated into the polymer matrix to create a multifunctional material. The research investigates the impact of phage concentration, polymer composition, and surface topography on the antibiofilm properties of the resulting surfaces. The antibiofilm efficacy of the phage-incorporated polymeric surfaces is evaluated through comprehensive laboratory experiments and real-world marine exposure tests. Special emphasis is placed on the specificity of phages to target harmful bacteria while preserving the natural microbial balance in the marine environment. The durability and long-term stability ' of the polymeric surfaces are also examined to ensure sustained antibiofilm performance. Results from this research showcase the successful development of phage-incorporated polymeric surfaces with enhanced marine antibiofilm properties compared to traditional coatings. The specificity and selectivity of bacteriophages contribute to a targeted and environmentally friendly approach to biofilm prevention. The findings of this study hold significant promise for applications in the maritime industry, offering a sustainable solution to mitigate biofouling-related challenges. This research not only advances the understanding of phage-based antibiofilm strategies but also contributes to the development of innovative materials for biofouling control, addressing both environmental concerns and the need for effective marine surface protection'

No. of Pages : 12 No. of Claims : 5

(54) Title of the invention : RESIN MATRIX WITH NANOCOMPOSITES FOR ANTIFOULING APPLICATION AND ITS METHOD OF PREPARATION

(51) International classification :C09D0005160000, C12M0001340000, C09D0167000000, B63B0059040000, C02F0001500000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Resin matrix with nanocomposites for antifouling application and its method of preparation Biofouling, the unwanted attachment of micro and macro-organisms on surfaces immersed in water, poses significant challenges to the maritime industry. In recent years, polyester resin nanocomposites (PNC) have emerged as a promising approach for mitigating biofouling. In this method, PNCs were developed with a mixture of vinyl monomers, curing agent, catalyst and combination of metal oxide nanoparticles (NPs). Polyester resin matrix was prepared through polyesterification reaction. NPs incorporated polyester coatings characterized by ATR-FTIR, TGA-DSC, contact angle, and SEM. Lab—scale bacterial and diatom adhesion assays were performed by microscopic observation using different staining techniques, biofilm-associated EPS quantification, cell counting, and surface wettability at 48, 72, and 96h. The antifouling performance of different NPs incorporated in polyester coatings were observed in marine water for up to 100 days compared with commercial antifouling coating. A multivariate statistical analysis was performed to understand correlation between different biofouling communities and water parameters. In the lab scale study, mixed NP; incorporated polyester coating (1.5%) revealed minimum bacterial and diatom adhesion along with less surface wettability. In in-situ conditions, the percentage area covered by fouling organisms exhibited a maximum coverage on control surfaces and a minimum on mixed NPs incorporated polyester coating (1.5%) with barnacles and tubeworms as a significant fouling community followed by the green mussel. These coatings have shown excellent performance in reducing the adhesion of marine organisms, including bacteria, algae, and barnacles. Furthermore, long-term stability and durability were observed in NPs incorporated with polyester coating under harsh marine conditions, making them suitable for antifouling applications.

No. of Pages : 16 No. of Claims : 7

(54) Title of the invention : MICROSPORE-STRUCTURED RELICA MEDIATED SILICONE POLYMERS FOR BIOFILM ADHESION STUDIES

(51) International classification :G03F0007000000, B82Y0040000000, B29K0083000000, B82Y0010000000, C12M0001320000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY Address of Applicant :Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, PIN-600 119 ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. D. Inbakandan Address of Applicant :Head, Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India—600 119 ----- ----- 2)B. Sheela Rani Address of Applicant :Director (Research), Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600119 ----- ----- 3)Clarita Clements Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600 119 ----- ----- 4)T. Naren Kumar Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai,Jeppiaar Nagar, Chennai, Tamil Nadu, India — 600 119. ----- ----- -
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(57) Abstract :
Microspore-structured replica mediated silicone polymers for Biofilm adhesion studies This research delves into the innovative application of soft lithography techniques for patterning Gore-Tex-modified Polydimethylsiloxane (PDMS) and Polyurethane surfaces, unlocking a new realm for biofilm adhesion studies. Soft lithography enables the creation of micro and nanostructured surfaces, offering a tailored platform to investigate the intricate dynamics of microbial adhesion. Gore-Tex is renowned for its hydrophobic characteristics and is strategically employed to modify PDMS and Polyurethane, introducing certain surface properties. The biocompatible nature of PDMS and Polyurethane, coupled with their transparency and versatility, facilitates real—time observation and quantitative analysis of biofilm formation. This interdisciplinary approach intersects with materials science, microfabrication, and microbiology providing insights into biofilm adhesion dynamics in environments and industrial scenarios.

No. of Pages : 12 No. of Claims : 6

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Docket Number:88261

Date/Time : 31/08/2023

Agent Number:

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Sr No.	CBR No.	Reference Number /Application Type	Application Number	Title/Remarks	Amount Paid
1	39328	ORDINARY APPLICATION	202341058447	METAL ORGANIC FRAMEWORK BASED AIR DETOXIFIER	1750
2		E-101/11056/2023-CHE	202341058447	Correspondence	0
3		E-2/4033/2023-CHE	202341058447	Form2	0
4		E-106/6328/2023-CHE	202341058447	Form28	0
5		E-101/11057/2023-CHE	202341058447	Others(EDUCATIONAL INSTITUTION ELIGIBILITY DOCUMENT)	0
Total :					1750

Received a sum of Rs. 1750 (Rupees One Thousand Seven Hundred & Fifty only) through

Payment Mode	Bank Name	Cheque/Draft Number	Cheque/Draft Date	Amount in Rs
Cash	---	---	---	1750

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Docket Number:129262

Date/Time : 30/11/2023

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 GANDHI SALAI, CHENNAI-600119. stanleyabraham.cor@gmail.com +919841658827

Sr No.	CBR No.	Reference Number /Application Type	Application Number	Title/Remarks	Amount Paid
1	55658	ORDINARY APPLICATION	202341081396	PHYCO-COLLOID BASED EDIBLE POLYMERS	1750
2		E-101/20661/2023-CHE	202341081396	Correspondence	0
3		E-2/5463/2023-CHE	202341081396	Form2	0
Total :					1750

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ORIGINAL

क्रम सं/ Serial No.: 156516



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

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डिजाइन सं. / Design No.

333876-001

तारीख / Date

04/10/2020

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **MUFFLER** से संबंधित है, का पंजीकरण, श्रेणी 15-01 में 1.Sathyabama Institute Of Science And Technology 2. Dr. V K Bupesh Raja 3.Dr. B Sheela Rani 4.Dr. V Ganesh Kumar 5.Dr. R Padmapriya 6.Mr. J Baalamurugan 7.Mr. Annipeddi Venkata Ramana Sundar Kasyap 8.Mr. S Krishna Raj 9.Mr. M Deepak Sairam 10.Mr. Akash Mishra 11.Mr. Ritam Das के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-01 in respect of the application of such design to **MUFFLER** in the name of 1.Sathyabama Institute Of Science And Technology 2. Dr. V K Bupesh Raja 3.Dr. B Sheela Rani 4.Dr. V Ganesh Kumar 5.Dr. R Padmapriya 6.Mr. J Baalamurugan 7.Mr. Annipeddi Venkata Ramana Sundar Kasyap 8.Mr. S Krishna Raj 9.Mr. M Deepak Sairam 10.Mr. Akash Mishra 11.Mr. Ritam Das.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 09/02/2024
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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Application Details

APPLICATION NUMBER	202341067250
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	06/10/2023
APPLICANT NAME	1 . IQBAL NIYAS AHMED 2 . Dr. Azhagu Saravana Babu Packirisamy 3 . Prof. T. Srivani 4 . Dr. K. Prabu 5 . Dr. M.I. Niyas Ahamed 6 . Mrs. G. Sharmila 7 . Dr. Jayaseelan Chidambaram 8 . Dr. Siva Durairaj 9 . Mr. Imran Ahmad Malik 10 . Dr Nalini Ramachandran U 11 . Dr.R.Saravanan
TITLE OF INVENTION	INDIAN POLYHERBAL MEDICINE IN THE TREATMENT OF UPPER GASTROINTESTINAL CANCER
FIELD OF INVENTION	CHEMICAL
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ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	24/11/2023

Application Status

APPLICATION STATUS	Awaiting Request for Examination
--------------------	----------------------------------

[View Documents](#)

➡ Filed ➡ Published ➡ RQ Filed ➡ Under Examination ➡ Disposed

In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in



ORIGINAL

क्रम सं/ Serial No.: 159928



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

402424-001

तारीख / Date

18/12/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **IOT BASED SOIL MOISTURE LEVEL INDICATOR** से संबंधित है, का पंजीकरण, श्रेणी 10-04 में 1.Dr. P. Mohana 2. Dr. S. Muthusamy 3.Dr. Riya Ann Mathew 4.Dr. Marykutty Abraham 5.Dr. V. Gopal के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-04 in respect of the application of such design to **IOT BASED SOIL MOISTURE LEVEL INDICATOR** in the name of 1.Dr. P. Mohana 2. Dr. S. Muthusamy 3.Dr. Riya Ann Mathew 4.Dr. Marykutty Abraham 5.Dr. V. Gopal.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :

Date of Issue 14/03/2024



डिजाइन की पंजीकरण
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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441016225 A

(19) INDIA

(22) Date of filing of Application :07/03/2024

(43) Publication Date : 22/03/2024

(54) Title of the invention : SHORE LINE STABILIZATION TO PROTECT AGAINST EROSION USING BIOMIMICRY TO MAINTAIN THE INTEGRITY OF MARINE STRUCTURES.

(51) International classification :G06Q0030000000, G06F0016340000, G06Q0050260000,
G06Q0050080000, C05F0011000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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(57) Abstract :
Globally, the construction sector is regarded as one of the major contributors to greenhouse gas emissions, energy consumption, freshwater usage, resource utilization, and solid waste generation. With a constantly growing population and increased urbanization, this is only predicted to rise. Thus, achieving sustainable development in the construction sector has become an urgent necessity. The adoption of biomimicry in the construction sector is one of the most innovative concepts towards the shift into sustainable practices in construction. However, it has been noticed that the concept of biomimicry is very broad, relatively new, and abstract. Thus, after reviewing previously conducted research on the subject, a noticeable lack of knowledge on the effective implementation of the biomimicry concept was found to be present. Therefore, this work seeks to fill this knowledge gap whereby it aims to explore the development of the biomimicry concept in the field of architecture, building construction, and civil engineering with a systematic review approach of research related to biomimicry in these three fields. This aim is guided by an objective of developing a clear understanding of the application of the biomimicry concept in architecture, building construction, and civil engineering fields. The timeframe considered for this review is between 2000 and 2022. The qualitative exploratory nature of this research focuses on reviewing databases such as Science Direct, ProQuest, Google Scholar, and MDPI, as well as book chapters, editorials, and official websites to extract relevant information using an eligibility criterion of title and abstract review, inclusion of key terms, and detailed review of chosen articles. This work will improve the understanding of the biomimicry concept and how it can be applied in the built environment.

No. of Pages : 12 No. of Claims : 3



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Office

Certificate of Registration for a UK Design

Design number: 6314540

Grant date: 02 October 2023

Registration date: 22 September 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Mohana Perumal, Dr. Anuradha Perumal, Dr Ammaan Myilswami, Dr. Selvi

Chellamuthu, Dr. Prithiva Nagarajan, Dr. Surendra Kumar Gautam, Mohd Ashaq,

Dr. Neelamegam Devarasu

in respect of the application of such design to:

AGRICULTURAL DRONE FOR PESTICIDE SPRAY

International Design Classification:

Version: 14-2023

Class: 12 MEANS OF TRANSPORT OR HOISTING

Subclass: 07 AIRCRAFT AND SPACE VEHICLES

Version: 14-2023

Class: 15 MACHINES, NOT ELSEWHERE SPECIFIED

Subclass: 03 AGRICULTURAL AND FORESTRY MACHINERY

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.





ORIGINAL

क्रम सं/ Serial No.: 159928



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

402424-001

तारीख / Date

18/12/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **IOT BASED SOIL MOISTURE LEVEL INDICATOR** से संबंधित है, का पंजीकरण, श्रेणी 10-04 में 1.Dr. P. Mohana 2. Dr. S. Muthusamy 3.Dr. Riya Ann Mathew 4.Dr. Marykutty Abraham 5.Dr. V. Gopal के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-04 in respect of the application of such design to **IOT BASED SOIL MOISTURE LEVEL INDICATOR** in the name of 1.Dr. P. Mohana 2. Dr. S. Muthusamy 3.Dr. Riya Ann Mathew 4.Dr. Marykutty Abraham 5.Dr. V. Gopal.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue 14/03/2024



कुलत की संख्या
402424-001

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



ORIGINAL

मूल/No : 131088



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CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No. : 377609-001
तारीख / Date : 18/01/2023
पारस्परिकता तारीख / Reciprocity Date* :
देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **FISH TANK** से संबंधित है, का पंजीकरण, श्रेणी 30-02 में 1. Dr. M . Rajeshwari 2. Dr. S. Kumaran 3. Dr. B. Deivasigamani 4. Dr. S.R. Pugazhvendan 5. Dr. K. Balakrishnan 6. Dr. P. Ronald Ross 7. Dr. Mani Panagal के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

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डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

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निर्गमन की तारीख/Date of Issue : 15/03/2023

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :24/07/2023

(21) Application No.202341049880 A

(43) Publication Date : 01/09/2023

(54) Title of the invention : INDUSTRIAL WASTEWATER TREATMENT TECHNOLOGY IN PETROLEUM AND CHEMICAL INDUSTRIAL

(51) International classification :C02F0001280000, C02F0009000000, C02F0001000000, C02F0101300000, C02F0001720000
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
INDUSTRIAL WASTEWATER TREATMENT TECHNOLOGY IN PETROLEUM AND CHEMICAL INDUSTRIAL ABSTRACT: Growing energy cost and demand has motivated many organizations to achieve smart ways to monitor, control, and save energy. Smart automation can reduce costs while still satisfying energy demand. The residential, commercial, and industrial sectors can utilize the technologies of the Internet of Things (IoT) to manage energy consumption better. This paper presents a low-cost, open-source, and reliable Supervisory Control and Data Acquisition (SCADA) system for home monitoring and control system. The presented SCADA system consists of analog sensors, ESP32, Node-RED, and Message Queuing Telemetry Transport (MQTT) through local Wi-Fi to remotely access and control appliances. This system helps the users to monitor various conditions in the home, such as temperature, humidity, pressure, and light intensity. Thus, users can remotely monitor various devices such as lights, fans, heating/cooling systems, make decisions based on the feedback of sensors. The term "industrial wastewater treatment" encompasses the processes employed to purify water that has been contaminated by human activities within industrial or commercial contexts, prior to its discharge into the natural environment or its utilisation for alternative purposes. This process is conducted in order to facilitate the reuse of water. The chemical composition of water, denoted as H₂O, indicates that it consists only of hydrogen and oxygen elements. Water is commonly employed as an inorganic liquid. Wastewater refers to water that has been augmented with various organic or inorganic elements, such as elevated levels of nutrients, nitrogen, and phosphorus. These additions might occur due to fluctuations in weather patterns, the disposal of domestic waste, the discharge of industrial waste, or a lack of awareness and knowledge. Consequently, wastewater can serve as a potential reservoir for waterborne diseases. The management of wastewater effluents poses significant regulatory challenges for chemical industries globally. The objective of this study is to demonstrate the diverse methodologies available for the treatment of industrial wastewater. This category encompasses a range of processes, including physical, chemical, and biological mechanisms, alongside engineered wetland systems, several oxidation techniques of varying complexity, and more methodologies. The efficacy of removing direct dyes from wastewater can be significantly enhanced by employing activated carbon derived from inexpensive materials, such as agricultural waste or modified natural polymers. The most effective approach for mitigating soluble and biodegradable organic pollutants has been determined to involve a synergistic integration of anaerobic and aerobic treatment methodologies. The utilisation of membranes in the last stage of industrial wastewater treatment has shown a notable increase in recent times. This article discusses the application of chemical oxidation as a means of wastewater remediation. The text also discusses conventional chemical treatment procedures as well as emerging oxidation technologies.

No. of Pages : 13 No. of Claims : 9

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G.A.R.6
[See Rule 22(1)]
RECEIPT



Docket No 17821

Date/Time 2023/02/20 18:53:25

To
Saurabh Kumar Jain

Userid: rsaurabh26

F-440, Delta-1, Greater Noida

CBR Detail:

Sr. No.	Ref. No./Application No.	App. Number	Amount Paid	C.B.R. No.	Form Name	Remarks
1	202341011517	TEMP/E-1/13305/2023-CHE	1600	7634	FORM 1	AN EVALUATION ON ECOLOGICAL CONSEQUENCES OF NANOTECHNOLOGY IN AGRI-CULTURE
2	E-18(iii)/511/2023/CHE	5586/CHE/2015	320	7634	FORM 13	----
3	E-12/1398/2023/CHE	202341011517	2500	7634	FORM 9	----
4	E-137/1570/2023/CHE	5586/CHE/2015	0	-----	FORM 30/S7(2)/R10	----

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
N-0001102723	Online Bank Transfer	2002230034860	4420.00	1475001020000001

Total Amount : ₹ 4420.00

Amount in Words: Rupees Four Thousand Four Hundred Twenty Only

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THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 of The Patents Rules)

क्रमांक : 044153104
SL No :



पेटेंट सं. / Patent No. : 430628
आवेदन सं. / Application No. : 202241036040
फाइल करने की तारीख / Date of Filing : 23/06/2022
पेटेंटी / Patentee : SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित A METHOD FOR PREPARING BIMETALLIC COATING FOR ANTIBIOFOULING AND CORROSION PROTECTION नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख जून 2022 के तेइसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled A METHOD FOR PREPARING BIMETALLIC COATING FOR ANTIBIOFOULING AND CORROSION PROTECTION as disclosed in the above mentioned application for the term of 20 years from the 23rd day of June 2022 in accordance with the provisions of the Patents Act, 1970.



अनुदान की तारीख : 28/04/2023
Date of Grant :

पेटेंट नियंत्रक
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाता है, जून 2024 के तेइसवें दिन को और उसके परन्तत प्रत्येक वर्ष में उसी दिन देय होगी।

Note - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 23rd day of June 2024 and on the same day in every year thereafter



क्रम सं/SL No :044168839



पेटेंट कार्यालय, भारत सरकार
पेटेंट प्रमाण पत्र

The Patent Office, Government Of India
Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

479419

आवेदन सं. / Application No.

202241036039

फाइल करने की तारीख / Date of Filing

23/06/2022

पेटेंटी / Patentee

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित **A METHOD TO DEVELOP MECHANICALLY STABLE, ANTIMICROBIAL CONTAINING BIOCOMPATIBLE CERAMIC COATED TITANIUM** नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख जून 2022 के तेइसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **A METHOD TO DEVELOP MECHANICALLY STABLE, ANTIMICROBIAL CONTAINING BIOCOMPATIBLE CERAMIC COATED TITANIUM** as disclosed in the above mentioned application for the term of 20 years from the 23rd day of June 2022 in accordance with the provisions of the Patents Act, 1970.

अनुदान की तारीख : 08/12/2023
Date of Grant :



पेटेंट नियंत्रक
Controller of Patents

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, जून 2024 के तेइसवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देव होगी।
Note - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 23rd day of June 2024 and on the same day in every year thereafter.

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341075567 A

(19) INDIA

(22) Date of filing of Application :06/11/2023

(43) Publication Date : 17/11/2023

(54) Title of the invention : METHOD FOR DEVELOPMENT OF CHEMICAL AND FOULING RESISTANT COATINGS FOR ENVIRONMENTAL APPLICATIONS

(51) International classification :C04B0028000000, G01N0021640000, G02B0021160000, C04B0041000000, C04B0040000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

1)SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

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Name of Applicant : NA

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(57) Abstract :

ABSTRACT METHOD FOR DEVELOPMENT OF CHEMICAL AND FOULING RESISTANT COATINGS FOR ENVIRONMENTAL APPLICATIONS Accordingly, embodiment's herein disclose: a method for development of chemical and fouling resistant coatings for environmental applications. The method involves preparing a concrete samples for the deposition of geopolymer coating. The small concrete samples are prepared with the size of 30—30 mm using cement-concrete mixer followed using a - concrete block making machine. The concrete surfaces are slightly rubbed with emery paper for better surface smoothness after preparation of concrete samples. Followed by, curing all the cylinders for 28 days and sliced into 100 mm — 10 mm small cylindrical concrete specimens after casting. The mortar specimens of size 35 mm—10 mm are castes and used for the epifluorescence microscopy study. All the concrete and mortar specimens were polished with 80 grit silicon carbide emery sheets to make the surface smooth and free from any irregularities.

No. of Pages : 10 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/11/2023

(21) Application No.202341075535 A

(43) Publication Date : 17/11/2023

(54) Title of the invention : METHOD FOR PREPARATION OF THERMAL INSULATIVE COATINGS FOR ROOFS AND STEELS

(51) International classification :G21F0003000000, H01L0049020000, E04D0003080000, F27D0001020000, B65D0081380000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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Address of Applicant : JEPPIAAR NAGAR, RAJIV GANDHI ROAD, CHENNAI-600119, TAMILNADU, INDIA -----

Name of Applicant : NA

Address of Applicant : NA

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2)D. Dinesh Kumar

Address of Applicant :Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India PIN- 600119D578} -----

3)K N Sruthi Sree

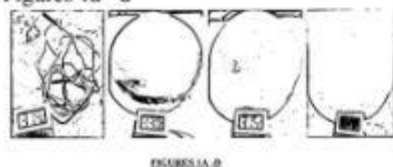
Address of Applicant :Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India, PIN- 600119 -----

4)Gobi Saravanan Kaliaraj

Address of Applicant :Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India, PIN- 600119 -----

(57) Abstract :

Accordingly, embodiments herein disclose a method for preparation of thermal insulative coatings for roofs and steels. The method involves using sodium silicate as initial precursor followed by Al_2O_3 and mica particles, and making coating formulation, 30-50 wt% of the sodium silicate, 10-15 wt% of Al_2O_3 and 3-5 wt% of mica along with sufficient addition of distilled water. The sodium silicate is initially added into the water mix thoroughly till it gets dissolved completely followed by admixing the Al_2O_3 and mica in the solution. The coating solution applied on the sample surface after homogeneous mixing. Figures to be published with Abstract: Figures 1a -d





Intellectual
Property
Office

Registered design
[UNCERTIFIED COPY]

Design details

Design application number

6330045

Filing date (provisional)

01 December 2023

Defer registration

No

Design

Medical device

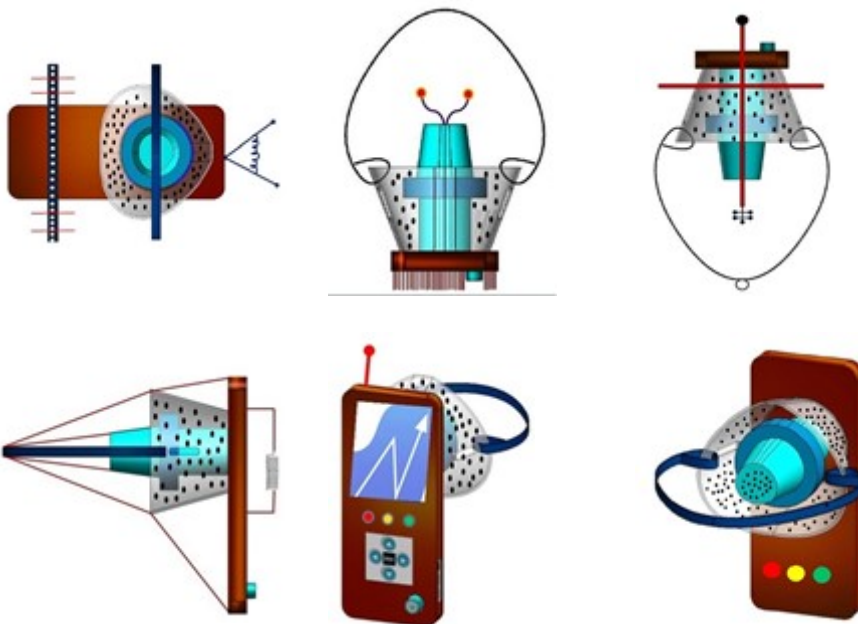
Additional description

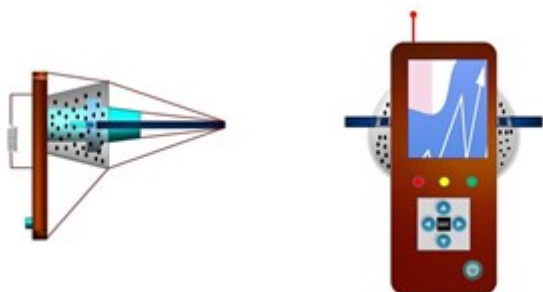
Medical device for Respiratory cancer detection using Volatile markers in breathing air.

Illustration disclaimer

No claim is made for the colour shown

Illustrations





Repeated surface pattern

Yes

Priority claims

None

Owner details

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Please note this is an uncertified copy of your registration document which you can use for research or personal use.

- [Feedback](#)

Design number
6330045

Status
Registered

Registration date
1 December 2023

Renewal date
1 December 2028

Overview

Application date
1 December 2023

Grant date
28 May 2024

Publication date
29 May 2024

Indication of Product
Medical device

Classification

Class	24 - MEDICAL AND LABORATORY EQUIPMENT
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Sub class	02 - MEDICAL INSTRUMENTS, INSTRUMENTS AND TOOLS FOR LABORATORY USE
-----------	--

Illustrations

Disclaimer
No claim is made for the colour shown

Repeated surface pattern design
Yes

Designs



Names and addresses

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Owners

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History

No history is available for this design

(54) Title of the invention : METHOD FOR PRODUCTION OF PHYTASE FROM ROCKY SOIL ISOLATED BACTERIAL STRAIN

(51) International classification :C12N0001200000, A23K0020189000, C12R0001010000, C12N0009160000, C12Q0001180000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY Address of Applicant :SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, JEPPIAAR NAGAR, RAJIV GANDHI ROAD, CHENNAI-600119, TAMILNADU, INDIA --- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Nandha kumar Suresh Address of Applicant :Junior Research Fellow, Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai: Tamil Nédu, India PIN- 600119 ----- 2)Mohana Priya Srinivasan Address of Applicant :Junior Research Fellow, Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai: Tamil Nédu, India PIN- 600119 ----- 3)Ajith Chandrasekar Address of Applicant :Junior Research Fellow, Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nfidu, India PIN- 600119 ----- 4)Dayanandan Anandan Address of Applicant :Professor (Reseach), Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nfidu, India, PIN- 600119-----
---	--

(57) Abstract :

ABSTRACT METHOD FOR PRODUCTION OF PHYTASE FROM ROCKY SOIL ISOLATED BACTERIAL STRAIN

Accordingly, embodiment s herein disclosle. a method for production of phytase from rocky soil isolated bacterial strain. The mgethod involves collecting samples from rocky soil, and colonizing the sampies using serifil dilution technique on nutrient agar plate and incubated at room temperature for 48 hour's. Followed by, streaking the isolated colonies on the phytase screening agar (PSA) plate§ and incubated for 48 hours to observed zone - of clearance around tfie, bacterial strains. The selected bacterium is inoculated in phytase PATENT screening broth (PCB) and incubated in lZOrpm at 370C for 5 days. After the incubation broth is centrifuged in 10000rpm for 4 fminutes. Further, the proposed method may involve adding the ice-cold 'acetone to the crude and kept at 4°C for overnight. The precipitation is resus Pended with sodium, acetate buffer and followed by the dialysis technique.

No. of Pages : 7 No. of Claims : 5

(54) Title of the invention : PROCESS FOR PRODUCTION OF COLD ADOPTED AND SALT TOLERANT AMYLASE FROM MARINE BACTERIUM

(51) International classification :C12N0001200000, C12Q0001400000, H04L0061451100, A23L0033100000, C05D0005000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

PROCESS FOR PRODUCTION OF COLD ADOPTED AND SALT TOLERANT AMYLASE FROM MARINE BACTERIUM

Accordingly, embodiments herein disclose a process for production of cold adopted and salt tolerant amylase from marine bacterium. The process involves selecting samples from the Trisea Sangan Beach, and screening the isolates for amylase activity by plate assay method in Stal'ch Agar. The isolates are tested for the best enzyme production under optimum pH, temperature, substrate concentration and incubation time. Further, the proposed process may involve adding Sodium chloride to the existing (Zobell Marine Broth) broth to improve; the salt tolerant and cold adoptive amylase enzyme from the bacterium. Followed by, separating the crude enzyme (supernatant) from the bacterial mass by centrifuge, and determining enzyme activity by DNS method A and determining the total protein by Lowry's method.

No. of Pages : 7 No. of Claims : 4

(54) Title of the invention : METHOD FOR PRODUCTION OF ALKALINE STABLE LIPASE FROM FROM SALT PAN ISOLATED BACTERIA

(51) International classification :C01D0003060000, C12N0009200000, C12Q0001040000, C12Q0001440000, C12M0001300000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY Address of Applicant :JEPPIAAR NAGAR, RAJIV GANDHI ROAD, CHENNAI - 600119 TAMILNADU INDIA, ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mohana Priya Srinivasan Address of Applicant :Junior Research Fellow, Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India PIN- 600119 ----- 2)Nandha kumar Suresh Address of Applicant :Junior Research Fellow, Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai Tamil Nadu, India PIN- 600119 ----- 3)Ajith Chandrasekar Address of Applicant :Junior Research Fellow, Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India PIN- 600119 ----- 4)Dayanandan Anandan Address of Applicant :Professor (Research), Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India, PIN- 600119 -----
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(57) Abstract :

ABSTRACT METHOD FOR PRODUCTION OF ALKALINE STABLE LIPASE FROM i} SALT PAN ISOLATED BACTERIA Accordingly, embodiment herein disclos; a method for production of alkaline stable lipase from salt pan isolated bacteria. The method involves collecting samples from salt pan corals, and screening the lipase activity albng with tributary as source using zobell marine agar. Followed by, adding and disseminating the 100 pl sample using a sterile LRod, and incubating'plates at 37°C for124 hours after streaking. The clear zone is observed around the bacterial colonies. indicated the hydrolysis of tributary and confirmed the presen'ce of lipase activity. Funher, the proposed method may involve enhancing the alkaline stable lipase production of the selected bacterium using alkaline nature of the medium; wherein the selected media is autoclaves at 15 psi, 121°C for 15 minutes after which 10 ml/L of olive oil is added and mixed thoroughly. After complete incubation, the culture is centrifuged aqd the superannuate further proceeded for the purification process

No. of Pages : 8 No. of Claims : 4



सत्यमेव जयते



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

पेटेंट प्रमाण पत्र

Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

487479

आवेदन सं. / Application No.

201941009691

फाइल करने की तारीख / Date of Filing

13/03/2019

पेटेंटी / Patentee

Sathyabama institute of Science and Technology (Deemed to be University)

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित **ALTERNATIVE SUPPLEMENT PROCESS FOR SERUM IN ANIMAL CELL CULTURE MEDIUM** नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख मार्च 2019 के तेरहवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **ALTERNATIVE SUPPLEMENT PROCESS FOR SERUM IN ANIMAL CELL CULTURE MEDIUM** as disclosed in the above mentioned application for the term of 20 years from the 13th day of March 2019 in accordance with the provisions of the Patents Act, 1970.



[Signature]

Controller of Patents

अनुदान की तारीख : 22/12/2023
Date of Grant :

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, मार्च 2021 के तेरहवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।

Note - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 13th day of March 2021 and on the same day in every year thereafter.

Urkunde

über die Eintragung des
Gebrauchsmusters Nr. 20 2023 106 047

Bezeichnung:

Eine Formulierung zur Synthese des ternären Nanokomposits CeO_2 - CuO - $\text{Cu}(\text{OH})_2$

IPC:

C01F 17/30

Inhaber/Inhaberin:

Mahalakshmi, Govindharaj, Puliur, Tamil Nadu, IN

Mani, Rajasekar, Dr., Thiruvannamalai, Tamil Nadu, IN

Meyvel, Subramani, Dr., Salem, Tamil Nadu, IN

Murugadoss, Govindasamy, Dr., Villupuram, Tamil Nadu, IN

Parthibavarman, Mathivanan, Dr., Salem, Tamil Nadu, IN

Salla, Sunitha, Dr., Chennai, Tamil Nadu, IN

Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu, IN

Tag der Anmeldung:

19.10.2023

Tag der Eintragung:

27.11.2023

Die Präsidentin des Deutschen Patent- und Markenamts



Eva Schewior
München, 27.11.2023





सत्यमेव जयते



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

पेटेंट प्रमाण पत्र

Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.

521238

आवेदन सं. / Application No.

201941027791

फाइल करने की तारीख / Date of Filing

11/07/2019

पेटेंटी / Patentee

Dr. Thankaraj Salammal Shyju

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकरित **TUNABLE OPTOELECTRONIC PROPERTIES AND HIGHLY EFFICIENT P-TYPE METAL NITRIDE BY BARIUM (BA) DOPING** नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख जुलाई 2019 के ग्यारहवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **TUNABLE OPTOELECTRONIC PROPERTIES AND HIGHLY EFFICIENT P-TYPE METAL NITRIDE BY BARIUM (BA) DOPING** as disclosed in the above mentioned application for the term of 20 years from the 11th day of July 2019 in accordance with the provisions of the Patents Act, 1970.



इकांत की दंडित
पेटेंट नियंत्रक

अनुदान की तारीख : 07/03/2024
Date of Grant :

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, जुलाई 2021 के ग्यारहवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।

Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 11th day of July 2021 and on the same day in every year thereafter.



Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details

APPLICATION NUMBER	202341032360
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	08/05/2023
APPLICANT NAME	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
TITLE OF INVENTION	"MECHANOSYNTHESIS OF QUATERNARY CHALCOGENIDES"
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	info@humcen.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	08/05/2023
PUBLICATION DATE (U/S 11A)	16/06/2023

Application Status

APPLICATION STATUS	FER Issued, Reply not Filed
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**INTELLECTUAL
PROPERTY INDIA**

PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS



सत्यमेव जयते

क्रमांक : 044153381
SL No :



भारत सरकार
GOVERNMENT OF INDIA

पेटेंट कार्यालय
THE PATENT OFFICE

पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No. : 431354
आवेदन सं. / Application No. : 201641037331
फाइल करने की तारीख / Date of Filing : 01/11/2016
पेटेंटी / Patentee : SATHYABAMA UNIVERSITY

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित AN AUTOMATIC SYSTEM FOR TREATMENT AND RECYCLING OF WATER FOR TRAIN COMPARTMENT WASH BASINS नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख नवम्बर 2016 के पहले दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled AN AUTOMATIC SYSTEM FOR TREATMENT AND RECYCLING OF WATER FOR TRAIN COMPARTMENT WASH BASINS as disclosed in the above mentioned application for the term of 20 years from the 1st day of November 2016 in accordance with the provisions of the Patents Act, 1970.



अनुदान की तारीख : 09/05/2023
Date of Grant :

पेटेंट नियंत्रक
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, नवम्बर 2018 के पहले दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।

Note. - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 1st day of November 2018 and on the same day in every year thereafter.

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संदर्भ सं. / Ref. No:
POD/Application No /201641037330

प्रेषण दिनांक / Date of Dispatch:
24-07-2023

सेवा में, / To

आवेदक /Applicant:
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विपक्षी /Opponent:
NA

ई-मेल प्रेषित /Email Sent to:
pramesh.kannan@rediffmail.com,dawnsudha@yahoo.com

विषय: आवेदन संख्या 201641037330 के संदर्भ में सुनवाई नोटिस
Sub: Hearing Notice in Reference of Application No. 201641037330

सुनवाई स्थल / Hearing Location: Through Video Conferencing
सुनवाई दिनांक व समय / Hearing Date & Time: 31/08/2023 / 16:00 HRS (IST) for (1h)
नियंत्रक ईमेल /Controller's Emailid: sudhajaveria.ipo@nic.in

आपके द्वारा प्रथम परीक्षण रिपोर्ट/ अनुवर्ती परीक्षण रिपोर्ट के अन्तर्गत के संदर्भ में, दिनांक 31/08/2023 को 16:00 HRS (IST) for (1h) को विडियो कॉन्फ्रेंसिंग माध्यम से Hearing U/S (14) सुनवाई तय की गयी है। अतः, आपको उपरोक्त दिनांक व समय पर नियंत्रक के समक्ष सुनवाई हेतु उपस्थित होना है।

With reference to your reply to the First examination Report/Subsequent Examination Report, a Hearing U/S (14) hearing has been scheduled in the matter through Video Conferencing on 31/08/2023 at 16:00 HRS (IST) for (1h) . You are therefore, required to appear before the Controller for the hearing on said date and time.

इस आवेदन को पेटेंट अनुदान हेतु क़ानून में लागू की अंतिम तिथि से पूर्व / अंतिम तिथि के उपरांत, निम्नलिखित आपत्तियां अभी भी शेष हैं।
The following objection(s) are still outstanding before / after the expiry of last date for putting this application in order for grant of patent.

Dr. sudha javeria
Assistant Controller of Patents & Designs

Welcome Viswanath Venkatesh [Sign out](#)

Controller General of Patents, Designs & Trade
Marks
G.S.T. Road, Guindy, Chennai-600032
Tel No. (091)(044) 22502081-84 Fax No. 044 22502066
E-mail: chennai-patent@nic.in
Web Site: www.ipindia.gov.in



सत्यमेव जयते



Docket No 7736

Date/Time 17/01/2024

To
Viswanath Venkatesh

User Id: Shanky1986

Core IP Services C-215 L.G.F Sarvodaya
Enclave

Sr. No.	App. Number	Ref. No./Application No.	Amount Paid	C.B.R. No.	Form Name	Remarks
1	202241058320	E-91/221/2024/CHE	0		FER_SER_REPLY	

Total Amount : ₹ 0

Amount in Words: Rupees Only

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PATENT OFFICE
INTELLECTUAL PROPERTY OFFICE BUILDING
Plot No. 32 Sector 14, Dwarka, New Delhi-110078
Tel no. (091)(11)25300200 Fax no. 011-28034301,02
E-mail: delhi-patent@nic.in
Website: www.ipindia.gov.in



संदर्भ सं. / Ref. No:
POD/Application No /202241058319

प्रेषण दिनांक / Date of Dispatch:
08-11-2023

आप से, / To

आवेदक /Applicant:
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

Registered Address For Service :Ramesh Kannan P, P Ramesh Kannan / Viswanath Venkatesh, QUADRIGA, 'MANAS', Plot 47 & 48, Krishnaveni Nagar, North Street, Mugailvakkam, Chennai – 600125, Tamil Nadu. Email: prk.quadriga@gmail.com,viswanath.venkatesh@gmail.com

विपक्षी /Opponent:
NA

ई-मेल भेजिए /Email Sent to:
prk.quadriga@gmail.com,viswanath.venkatesh@gmail.com

विषय: आवेदन संख्या 202241058319 के संदर्भ में सुनवाई नोटिस
Sub: Hearing Notice in Reference of Application No. 202241058319

सुनवाई स्थल / Hearing Location: Through Video Conferencing
सुनवाई दिनांक व समय / Hearing Date & Time: 08/01/2024 / 11:30 HRS(IST) for (1h)
नियंत्रक ईमेल /Controller's EmailId: ktaunk.ipo@nic.in

आपको द्वारा प्रथम परीक्षण रिपोर्ट/ अनुसूची परीक्षण रिपोर्ट के अंतर्गत के संदर्भ में, दिनांक 08/01/2024 को 11:30 HRS(IST) for (1h) को विडियो कॉन्फ्रेंसिंग माध्यम से Hearing U/S (14) सुनवाई लय की गयी है। अतः, आपको उपरोक्त दिनांक व समय पर नियंत्रक के समक्ष सुनवाई हेतु उपस्थित होना है।

With reference to your reply to the First examination Report/Subsequent Examination Report, a Hearing U/S (14) hearing has been scheduled in the matter through Video Conferencing on 08/01/2024 at 11:30 HRS(IST) for (1h) . You are therefore, required to appear before the Controller for the hearing on said date and time.

इस आवेदन को पेटेंट अलुप्राप्त हेतु पूरा न होने वाले कड़े अंतिम विधि से पूर्व / अंतिम विधि के उपरान्त, निम्नलिखित आपत्तियां अभी भी शेष हैं।
The following objection(s) are still outstanding before / after the expiry of last date for putting this application in order for grant of patent.

Dr. KAVITA TAUNK
Deputy Controller of Patents & Designs

*दिनांक/समय, स्थल, विधि व सुनवाई के बारे में अलग विवरण के लिए: कृपया निम्नलिखित यूआरएल देखें <http://ipindiaservices.gov.in/PatentCauseList>
Please refer to the following URL for: Date/Time, Venue, Status and other details about the Hearing
<http://ipindiaservices.gov.in/PatentCauseList>

टिप्पणी:- विडियो कॉन्फ्रेंसिंग के माध्यम से सुनवाई के समय के संबंध में मेल अलग से भेजी जायेगी।

Note:- Separate mail will be sent regarding the time of the Hearing through Video Conference.

* Hearing Objections are attached.

Controller General of Patents, Designs & Trade
Marks



सत्यमेव जयते

G.A.R.6
[See Rule 22(1)]
RECEIPT



Docket No 61048

Date/Time 2024/04/29 16:25:50

To
Viswanath Venkatesh

UserId: Shanky1986

Core IP Services C-215 L.G.F Sarvodaya
Enclave

CBR Detail:

Sr. No.	App. Number	Ref. No./Application No.	Amount Paid	C.B.R. No.	Form Name	Remarks
1	202441033877	TEMP/E-1/39830/2024-CHE	1600	28619	FORM 1	A METHOD OF SYNTHESISING KERATIN-BASED BIOPLASTIC FILM FROM HUMAN HAIR
2	R20244022371	202441033877	4000	28619	FORM 18	----
3	E-12/5312/2024/CHE	202441033877	2500	28619	FORM 9	----
4	E-106/5056/2024/CHE	202441033877	0	-----	FORM28	----

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
N-0001402502	Online Bank Transfer	2904240020611	8100.00	1475001020000001

Total Amount : ₹ 8100.00

Amount in Words: Rupees Eight Thousand One Hundred Only

Received from Viswanath Venkatesh the sum of ₹ 8100.00 on account of Payment of fee for above mentioned Application/Forms.

* This is a computer generated receipt, hence no signature required.

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Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6310985

Grant date: 25 September 2023

Registration date: 17 September 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Ved Kumar, Dr. Subha Krishna Rao, Mr. More Raviraj Ramrao, Mr. Arpan

Kumar Tripathi, Mr. Akshay Ashok Nemade, Dr. Jyotiram Arjun Sawale, Dr.

Sidheshwar Sangram Patil, Dr. Jitendra Malviya, Mr. Vinay Sagar Verma, Mr.

Usnale Vinod Digambarrao

in respect of the application of such design to:

Arsenic Toxicity Detector

International Design Classification:

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 01 APPARATUS AND EQUIPMENT FOR DOCTORS, HOSPITALS
AND LABORATORIES

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks
Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.





Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India



Application Details

APPLICATION NUMBER	202341077400
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	14/11/2023
APPLICANT NAME	1 . R.Sasirekha 2 . S.P.Rajapriya 3 . K.Triveni 4 . B.Shamreen Ahamed 5 . A.Kerolin Priya 6 . T.Bhanu Shree 7 . P.Nandhini
TITLE OF INVENTION	PEAK K-MEANS CLUSTERING WITH ML ALGORITHM FOR KEYWORD SEARCH
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	sasirekharajeshkumar@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No. : 388424-001

तारीख / Date : 15/06/2023

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **WEARABLE FINGER MOUSE FOR DESKTOP** से संबंधित है, का पंजीकरण, श्रेणी 14-02 में 1.Dr. T. Purusothaman 2. Dr. Kulanthaivel G. 3.Dr. G. S. Uthayakumar 4.Dr. Ulagamuthalvi V. के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-02 in respect of the application of such design to **WEARABLE FINGER MOUSE FOR DESKTOP** in the name of 1.Dr. T. Purusothaman 2. Dr. Kulanthaivel G. 3.Dr. G. S. Uthayakumar 4.Dr. Ulagamuthalvi V..

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 26/07/2023
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पांच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



Extracts from the Register of Copyrights



प्रतिलिप्यधिकार कार्यालय, भारत सरकार | Copyright Office, Government Of India

दिनांक/Date: 22/11/2023

1. पंजीकरण संख्या/Registration Number

SW-17657/2023

2. आवेदक का नाम, पता तथा राष्ट्रीयता
Name, address and nationality of the applicant

DR.N.SRINIVASAN, ASSOCIATE PROFESSOR, DEPT OF CSE, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, CHENNAI-600119
INDIAN
OWNER

3. कृति के प्रतिलिप्यधिकार में आवेदक के हित की प्रकृति
Nature of the applicant's interest in the copyright of the work

COMPUTER SOFTWARE WORK THE WORK IS ABOUT THE COMPUTER SOFTWARE PROGRAM TO PREDICT THE FUTURE VALUE OF A STOCK.

4. कृति का वर्ग और वर्णन
Class and description of the work

PROGRAM TO PREDICT FUTURE VALUE FOR A SPECIFIC COMPANY SCRIPT IN STOCK TRADING

5. कृति का शीर्षक
Title of the work

PYTHON

6. कृति की भाषा
Language of the work

DR.N.SRINIVASAN, ASSOCIATE PROFESSOR, DEPT OF CSE, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, CHENNAI-600119
INDIAN

7. रचयिता का नाम, पता और राष्ट्रीयता तथा यदि रचयिता की मृत्यु हो गई है, तो मृत्यु की तिथि
Name, address and nationality of the author and if the author is deceased, date of his decease

UNPUBLISHED

8. कृति प्रकाशित है या अप्रकाशित
Whether the work is published or unpublished

N.A.

9. प्रथम प्रकाशन का वर्ष और देश तथा प्रकाशक का नाम, पता और राष्ट्रीयता
Year and country of first publication and name, address and nationality of the publisher

N.A.

10. बाद के प्रकाशनों के वर्ष और देश, यदि कोई हो, और प्रकाशकों के नाम, पते और राष्ट्रीयताएं
Years and countries of subsequent publications, if any, and names, addresses and nationalities of the publishers

N.SRINIVASAN, ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE ENGINEERING, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI-600119
INDIAN-600119
INDIAN

11. कृति में प्रतिलिप्यधिकार सहित विभिन्न अधिकारों के स्वामियों के नाम, पते और : राष्ट्रीयताएं और समुन्देशन और अनुज्ञापितों के विवरण के साथ प्रत्येक के अधिकार का विस्तार, यदि कोई हो।
Names, addresses and nationalities of the owners of various rights comprising the copyright in the work and the extent of rights held by each, together with particulars of assignments and licences, if any

N.SRINIVASAN, ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE ENGINEERING, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI-600119
INDIAN-600119
INDIAN

12. अन्य व्यक्तियों के नाम, पते और राष्ट्रीयताएं, यदि कोई हों, जो प्रतिलिप्यधिकार या उनके अधिकारों को समुन्देशित करने या अनुज्ञापित देने के लिए अधिकृत हों।
Names, addresses and nationalities of other persons, if any, authorised to assign or licence of rights comprising the copyright

T.JUDGI, ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE ENGINEERING, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI-600119
INDIAN-600119
INDIAN

13. यदि कृति एक 'कलात्मक कृति' है, तो कृति पर अधिकार रखने वाले व्यक्ति का नाम, पता और राष्ट्रीयता सहित मूल कृति का स्थान। (एक वास्तुशिल्प कृति के मामले में कृति पूरी होने का वर्ष भी दिखाया जाना चाहिए)
If the work is an 'Artistic work', the location of the original work, including name, address and nationality of the person in possession of the work. (In the case of an architectural work, the year of completion of the work should also be shown).

N.A.

14. यदि कृति एक 'कलात्मक कृति' है जो किसी भी माल या सेवाओं के संबंध में उपयोग की जाती है या उपयोग किए जाने में सक्षम है, तो आवेदन में प्रतिलिप्यधिकार अधिनियम, 1967 की धारा 46 की उप-धारा (a) के प्रावधानों के अनुसार व्यापार चिह्न रजिस्ट्रार से प्रमाणन शामिल होना चाहिए।
If the work is an 'Artistic work' which is used or capable of being used in relation to any goods or services, the application should include a certification from the Registrar of Trade Marks in terms of the provision to Sub-Section (i) of Section 45 of the Copyright Act, 1957.

N.A.

15. यदि कृति एक 'कलात्मक कृति' है, तो क्या यह डिजाइन अधिनियम 2000 के अंतर्गत पंजीकृत है? यदि हां, तो विवरण दें।
If the work is an 'Artistic work', whether it is registered under the Designs Act 2000, if yes give details.

N.A.

16. यदि कृति एक 'कलात्मक कृति' है, जो डिजाइन अधिनियम 2000 के तहत एक डिजाइन के रूप में पंजीकृत होने में सक्षम है, तो क्या यह औद्योगिक प्रक्रिया के माध्यम से किसी वस्तु पर प्रयुक्त की गई है और यदि हां, तो इसे कितनी बार पुनरुत्पादित किया गया है?
If the work is an 'Artistic work', capable of being registered as a design under the Designs Act 2000, whether it has been applied as an article though an industrial process and, if yes, the number of times it is reproduced.

N.A.

17. टिप्पणी, यदि कोई हो/Remarks, if any

आवेदन की तिथि/Date of Application: 10/03/2023

प्राप्ति की तिथि/Date of Receipt: 10/03/2023



Registrar of Copyrights



Extracts from the Register of Copyrights



प्रतिलिप्यधिकार कार्यालय, भारत सरकार | Copyright Office, Government Of India

दिनांक/Dated: 20/11/2023

1. पंजीकरण संख्या/Registration Number

L-136386/2023

2. आवेदक का नाम, पता तथा राष्ट्रीयता
Name, address and nationality of the applicant

**DR.N.SRINIVASAN , ASSOCIATE PROFESSOR, DEPT OF
CSE, SATHYABAMA INSTITUTE OF SCIENCE AND
TECHNOLOGY, CHENNAI-600119
INDIAN**

3. कृति के प्रतिलिप्यधिकार में आवेदक के हित की प्रकृति
Nature of the applicant's interest in the copyright of the work

OWNER

4. कृति का वर्ग और वर्णन
Class and description of the work

**LITERARY/ DRAMATIC WORK A MUSIC PLAYER PLAYS A
MUSIC DEPENDS ON THE MOOD OF THE USER.BASICALLY
IT IDENTIFIES THE BEHAVIOUR OF THE USER AND MAKE
THE USER IN PLEASANT MOOD BY PLAYING HIS/HER
LOVEABLE SONGS.**

5. कृति का शीर्षक
Title of the work

**AUTOMATIC STRESS CONTROLLER USING USERS
BEHAVIOUR TO PLAY MUSIC.**

6. कृति की भाषा
Language of the work

ENGLISH

7. रचयिता का नाम, पता और राष्ट्रीयता तथा यदि रचयिता की मृत्यु हो गई है,
तो मृत्यु की तिथि
Name, address and nationality of the author and if the author is
deceased, date of his decease

**DR.N.SRINIVASAN , ASSOCIATE PROFESSOR, DEPT OF
CSE, SATHYABAMA INSTITUTE OF SCIENCE AND
TECHNOLOGY, CHENNAI-600119
INDIAN**

8. कृति प्रकाशित है या अप्रकाशित
Whether the work is published or unpublished

UNPUBLISHED

9. प्रथम प्रकाशन का वर्ष और देश तथा प्रकाशक का नाम, पता और राष्ट्रीयता
Year and country of first publication and name, address and
nationality of the publisher

N.A.

10. बाद के प्रकाशनों के वर्ष और देश, यदि कोई हों, और प्रकाशकों के नाम, पते
और राष्ट्रीयताएँ
Years and countries of subsequent publications, if any, and names,
addresses and nationalities of the publishers

N.A.

11. कृति में प्रतिलिप्यधिकार सहित विभिन्न अधिकारों के स्वामियों के नाम, पते और
राष्ट्रीयताएँ और समुद्देशित करने या अनुज्ञापित करने के लिए अधिकारों के
अधिकार का विस्तार, यदि कोई हो।
Names, addresses and nationalities of the owners of various rights
comprising the copyright in the work and the extent of rights held
by each, together with particulars of assignments and licences, if
any

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**DR.N.SRINIVASAN , ASSOCIATE PROFESSOR, DEPT OF
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INDIAN**

12. अन्य व्यक्तियों के नाम, पते और राष्ट्रीयताएँ, यदि कोई हों, जो प्रतिलिप्यधिकार
वाले अधिकारों को समुद्देशित करने या अनुज्ञापित देने के लिए अधिकृत हों
Names, addresses and nationalities of other persons, if any,
authorised to assign or licence of rights comprising the copyright

N.A.

13. यदि कृति एक 'कलात्मक कृति' है, तो कृति पर अधिकार रखने वाले व्यक्ति का
नाम, पता और राष्ट्रीयता सहित मूल कृति का स्थान। (एक वास्तुशिल्प कृति
के मामले में कृति पूरी होने का वर्ष भी दिखाया जाना चाहिए)
If the work is an 'Artistic work', the location of the original work,
including name, address and nationality of the person in possession
of the work. (In the case of an architectural work, the year of
completion of the work should also be shown).

N.A.

14. यदि कृति एक 'कलात्मक कृति' है जो किसी भी माल या सेवाओं के संबंध में
उपयोग की जाती है या उपयोग किए जाने में सक्षम है, तो आवेदन में
प्रतिलिप्यधिकार अधिनियम, 1957 की धारा 45 की उप-धारा (i) के प्रावधान के
अनुसार व्यापार चिह्न रजिस्ट्रार से प्रमाणित शामिल होना चाहिए।
If the work is an 'Artistic work' which is used or capable of being
used in relation to any goods or services, the application should
include a certification from the Registrar of Trade Marks in terms of
the provision to Sub-Section (i) of Section 45 of the Copyright Act,
1957.

N.A.

15. यदि कृति एक 'कलात्मक कृति' है, तो क्या यह डिजाइन अधिनियम 2001
अंतर्गत पंजीकृत है? यदि हाँ, तो विवरण दें।
If the work is an 'Artistic work', whether it is registered under
Designs Act 2000, if yes give details.

N.A.



Registrar of Copyrights



ORIGINAL

क्रम सं/ Serial No.: 154454



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

399390-001

तारीख / Date

07/11/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **IOT BASED PORTABLE HYGIENIC HEALTH MONITORING SYSTEM** से संबंधित है, का पंजीकरण, श्रेणी 24-01 में 1.Dr. V. Senthil Kumar 2. Dr. G. Murugan 3.Dr. N. Shanmugapriya 4.Mrs. V. Vijayalakshmi 5.Dr. A. Yovan Felix 6.Dr. Prashant Sunagar के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 24-01 in respect of the application of such design to **IOT BASED PORTABLE HYGIENIC HEALTH MONITORING SYSTEM** in the name of 1.Dr. V. Senthil Kumar 2. Dr. G. Murugan 3.Dr. N. Shanmugapriya 4.Mrs. V. Vijayalakshmi 5.Dr. A. Yovan Felix 6.Dr. Prashant Sunagar.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 19/01/2024
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

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Design Application Details

Application Number: 380844-001
Cbr Number: 200046
Cbr Date: 06/03/2023 14:44:58
Applicant Name:
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3. DR. V.N. SENTHIL KUMARAN

Design Application Status

Application Status: Application Accepted, Certificate of Design not Generated.

[Back](#)

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :31/03/2023

(21) Application No.202341025001 A

(43) Publication Date : 07/04/2023

(54) Title of the invention : Design system of Real-Time Moving Object Segmentation for Automated Driving using IoT

(51) International classification :G01C 213600, G01S 178900, G06T 170500, H04B 071850, H04W 044000
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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(57) Abstract :

Predicting the future state of the environment, avoiding collisions, and planning are just some of the tasks aided by object recognition in autonomous navigation in unmanned systems. However, existing 3D LiDAR point-cloud moving object segmentation (MOS) convolutional neural network (CNN) models are complex and have a large computation burden, making real-time processing on embedded platforms difficult. The process of adding LiDAR data annotations to still images is described in detail. Methods include receiving at least one LiDAR frame from the LiDAR sensor and at least one image frame from a camera sensor, discarding LiDAR points that represent a ground surface of the environment, segmenting LiDAR points of interest to identify at least one object of interest in the at least one LiDAR frame, and annotating the at least one image frame with a three-dimensional representation of the object of interest.

No. of Pages : 6 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/03/2023

(21) Application No.202331020780 A

(43) Publication Date : 07/04/2023

(54) Title of the invention : Drone based Cyber-Physical System for Water Quality Monitoring in Rural Areas

(51) International classification :B64C 390200, C02F 010000, C02F 033200, G01N 331800, H04W 040210
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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7)Faizal Mukthar Hussain S
8)Dr. Pradeep Balkrishna Pathak
9)V.R.Niveditha
10)Dr. Rakesh Kumar Pandey
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(57) Abstract :

There are many challenges while developing a rural area into smart city, such as air/water quality monitoring, water resource management, power grid implementation, and transport management. Water quality monitoring is one of them in which many researchers and scientists showed interest. The current water distribution systems always face leakage, failure, and maintenance delays due to the unavailability of real-time monitoring in distribution systems, which results in a high amount of water wastage. This can be solved by implementing a drone based cyber-physical system. This proposes a solution for water quality monitoring for distribution systems in a real-time environment based on low-cost commercial Drone. Various water quality parameters were monitored from the developed drone setup. The proposed architecture can log, analyse data, make decisions, and remotely represent the data. The use of drones the potential to revolutionize the way water quality is monitored, in remote and hard-to-re areas. The proposed system consists of a drone equipped with various for measuring parameters such as pH, temperature, and dissolved oxygen. The system also includes a component to process and analyse the collected by the drone. This system has the potential to real-time water quality monitoring, can be used for early detection of contaminants and help prevent waterborne diseases. The feasibility of this system, advantages over traditional monitoring methods and the challenges that need to addressed for successful implementation. This system has significant potential for the quality of life in rural, and its successful implementation could have far-reaching impacts.

No. of Pages : 5 No. of Claims : 1

5:00

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Department of Industrial Policy and Promotion
Ministry of Commerce and Industry

Design Application Details

Application Number:

401070-001

Cbr Number:

215176

Cbr Date:

30/11/2023 18:26:32

Applicant Name:

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| 3. Dr. D.Sheema | 4. A.Lakshna |
| 5. M.Jayanthi | 6. S.Ajithkumar |

Design Application Status

Application Status:

Application Accepted, Certificate of Design not Generated.

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Design Application Details

Application Number: 358298-001
Cbr Number: 213200
Cbr Date: 10/02/2022 11:52:01
Applicant Name: **1. Dr. R. Aroul Canessane**
2. Mr. Murari Devakannan Kamalesh
3. Mr. A Yovan Felix
4. Mrs. Ramya.G. Franklin

Design Application Status

Application Status: Examination Report has been Generated , Case is Waiting for Examination Report Reply (FER generated on 17/03/2022)

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :18/04/2023

(21) Application No.202341028184 A

(43) Publication Date : 05/05/2023

(54) Title of the invention : SMART FARMING METHODS TO PROTECT AGRICULTURAL CROPS FROM WILD ANIMALS

(51) International classification :A01B 391800, A01G 092400, A01M 291600, H01L 210200, H04N 071800
(86) International Application No:NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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-

(57) Abstract :

Our daily lives are heavily reliant on technology. The need for Internet of Things (IoT) has increased significantly across many industries, which has attracted significant research interest from both the academic community and the business community. IoT adoption has facilitated smart farming and precision agriculture, to name a few, solely in the agriculture industry. Every year, there are more attacks by wild animals on agricultural property, and the number of fatalities as a result of these attacks is rising quickly. As a result, less agricultural crop production is being produced. Farmers use a variety of approaches to address this issue, but government regulations work against them because they are designed to eliminate wild animals. Hence, there is no longterm remedy to these issues. This suggested approach combines vibration sensors for crop protection with Internet of Things application development to stop animal invasions into the crop field. In the proposed smart farming method, cutting-edge techniques like wireless sensors and IOT concepts are applied to safeguard both agricultural produce and wild animals from harm. Here, the tools are deployed with the aid of wireless sensors, which will identify the kind of animal that is approaching and, in accordance with that animal, produce a sound that is intended to scare it away. Using clever farming techniques to safeguard crops from wild animals can reduce the risk of harm to agriculture from both wild animal assaults and human contact.

No. of Pages : 7 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341028189 A

(19) INDIA

(22) Date of filing of Application :18/04/2023

(43) Publication Date : 05/05/2023

(54) Title of the invention : PHYTOSOME TARGET ORIENTED APPROACH IN TREATING BREAST CANCER: INVITRO MODELLING FOR EFFICIENCY ANALYSIS BY BINDING AFFINITY VIA MOLECULAR DOCKING.

(51) International classification :A61P 350000, G06Q 100600, G16B 153000, G16C 205000, H01L 510000		(71)Name of Applicant : 1)Mrs. VINITHA S Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING & TECHNOLOGY, COIMBATORE, 641062. -- -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor : 1)Ms. ABINAYA M Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING & TECHNOLOGY, COIMBATORE, 641062. -- -----
(61) Patent of Addition to Application Number	:NA	2)Ms. SATHYA M Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING & TECHNOLOGY, COIMBATORE, 641062. -- -----
Filing Date	:NA	3)Mrs. VINITHA S Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING & TECHNOLOGY, COIMBATORE, 641062. -- -----
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

Females are most commonly affected by breast cancer. This disease is a serious public health issue that demands attention because of its significant impact on the population. To determine its prognosis and particular treatment, more molecular analysis is needed. MCF-7, a frequently utilized breast cancer cell line, has been promoted for more than 40 years by a number of research teams, however the characteristics of this cell line have never been compiled. Herbs and plants have been utilized for both sustenance and medicine for ages. In this study, various plant species and its Phytocompounds are discussed that possess immune-stimulating and anti-tumor characteristics. Diverse varieties of herbs include a wide range of active phytochemicals, including carotenoids, flavonoids, ligands, polyphenolics, terpenoids, sulphides, lignans, and plant sterols. Several mechanisms govern how these phytochemicals work. These placebo approach promote the production of a protective enzyme glutathione transferase and stop the growth of new' cells. This study comprises Aegle marmelas, Glycine max, Ocimum basiicitm, Cynodon dactyion and Two Synthetic Molecules. The phylochemicals retrieved from above plants and synthetic molecules wdth side effects that have the targeted activity are processed by Molecular Docking in accordance to contemplate an excessive suppressing activity and show' its binding affinity towards the proteins associated w'ith MCF7 cell lines using PyRx, MGL and DSV tools. This approach remains unique in their role of enzymatic inhibition in the above mentioned cell line via ER and PR receptors.

No. of Pages : 9 No. of Claims : 6



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6319705

Grant date: 24 October 2023

Registration date: 18 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Mr.VENGATESHWARAN MASILAMANI, Dr.JAYANTHI SAMPATH,

Dr.SRIVIDHYA ELANGO VAN, Mr.AMANDEEP SINGH, Ms.UMA DEVI

GUNASEGARAN, Ms. HEMA RAMACHANDRAN, Mr.AROCKIA RAJ ABRAHAM

in respect of the application of such design to:

SOLAR BASED AUTOMATED RAILWAY TRACK INSPECTION TROLLEY

International Design Classification:

Version: 14-2023

Class: 12 MEANS OF TRANSPORT OR HOISTING

Subclass: 02 HANDCARTS, WHEELBARROWS

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.





Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details	
APPLICATION NUMBER	202341059270
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	04/09/2023
APPLICANT NAME	1 . Dr. B. Ankayarkanni 2 . Dr. P Sangeetha 3 . Ms. P. Kabitha
TITLE OF INVENTION	AN IOT BASED SYSTEM FOR REAL-TIME MONITORING OF PARKING LOTS AND AUTOMATIC BILLING
FIELD OF INVENTION	ELECTRONICS
E-MAIL (As Per Record)	ankayarkanni.s@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	06/10/2023

Application Status	
APPLICATION STATUS	Awaiting Request for Examination

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/09/2023

(21) Application No.202341059728 A

(43) Publication Date : 06/10/2023

(54) Title of the invention : Design system of NLP driven Voice using Machine Learning in Business Management

(51) International classification :G06F0040300000, H04L0051020000, G06N0003000000, G06Q0030000000, G06N0005040000
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
1)Dr.J.Cruz Antony, Sathyabama Institute of Science and Technology
Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Sathyabama College Road, Semmancheri, Chennai, Tamil Nadu 600119 Chennai -----
2)Dr.N.S.Usha, Sathyabama Institute of Science and Technology
3)Dr.M.Nafees Muneera, Sathyabama Institute of Science and Technology
4)Dr. B. U. Anu Barathi, Sathyabama Institute of Science and Technology
5)Dr. Prabu M, Amrita Vishwa Vidyapeetham
6)Dr A.C. Santha Sheela, Sathyabama Institute of Science and Technology
7)Mrs.D Jennifer, Panimalar Engineering College
8)Dr.A.Ronald Doni, Sathyabama Institute of Science and Technology
9)Ms.D. Deepa, Sathyabama Institute of Science and Technology
10)Mr. S.Praveen, Sathyabama Institute of Science and Technology
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
1)Dr.J.Cruz Antony, Sathyabama Institute of Science and Technology
Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Sathyabama College Road, Semmancheri, Chennai, Tamil Nadu 600119 Chennai -----
2)Dr.N.S.Usha, Sathyabama Institute of Science and Technology
Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Sathyabama College Road, Semmancheri, Chennai, Tamil Nadu 600119 Chennai -----
3)Dr.M.Nafees Muneera, Sathyabama Institute of Science and Technology
Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Sathyabama College Road, Semmancheri, Chennai, Tamil Nadu 600119 Chennai -----
4)Dr. B. U. Anu Barathi, Sathyabama Institute of Science and Technology
Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Sathyabama College Road, Semmancheri, Chennai, Tamil Nadu 600119 Chennai -----
5)Dr. Prabu M, Amrita Vishwa Vidyapeetham
Address of Applicant :Assistant Professor (Senior Grade), Department of Computer Science and Engineering, Amrita School of Computing, Amrita Vishwa Vidyapeetham, Chennai 601103 Chennai -----
6)Dr A.C. Santha Sheela, Sathyabama Institute of Science and Technology
Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Sathyabama College Road, Semmancheri, Chennai, Tamil Nadu 600119 Chennai -----
7)Mrs.D Jennifer, Panimalar Engineering College
Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Panimalar Engineering College, Poonamallee Chennai. Chennai -----
8)Dr.A.Ronald Doni, Sathyabama Institute of Science and Technology
Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Sathyabama College Road, Semmancheri, Chennai, Tamil Nadu 600119 Chennai -----
9)Ms.D. Deepa, Sathyabama Institute of Science and Technology
Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Sathyabama College Road, Semmancheri, Chennai, Tamil Nadu 600119 Chennai -----
10)Mr. S.Praveen, Sathyabama Institute of Science and Technology
Address of Applicant :Teaching Assistant, School of Computing, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology Sathyabama College Road, Semmancheri, Chennai, Tamil Nadu 600119 Chennai -----

(57) Abstract :

Due to technological developments, modern businesses have had to rely heavily on various forms of communication. The days of face-to-face meetings for commercial dealings, background checks, seminars, purchases, and contracts have passed. The study's overarching goal is to learn how NLP and AI can better respond to human needs by analyzing text-object connections made possible by the IoTs. Also discussed is the impact of technological advancements like natural language processing (NLP) and artificial intelligence (AI) embedded with internet of things (IoT) services on the business world. Companies have built complex NLP applications that rapidly satisfy human demands via text, phone conversations, smart records, and chatbots since communication has become the dominant force in the commercial world. Customers' preferences, wants, and needs are more heavily influenced by the ease of communication and connection. The majority of interactions, queries, and transactions with customers of today's service providers begin with some form of electronic communication. This research employs natural language processing (NLP) and artificial intelligence (AI) to show how businesses learn from their customers' experiences and how they use Internet of Things (IoT) devices to shape their clients' reactions, replies, and involvement with corporate management in the context of Industry 4.0. In this research, the idea of Behavior-oriented drive and influential function of IoTs on Customers in Industry 4.0 was applied to the question of how much of an impact Industry 4.0 has on consumers. Using these metrics, we find that IoTs' behaviorally driven and customer-influencing functions receive an average grade of 12 out of a possible 15. The study revealed that in the era of Industry 4.0, natural language processing (NLP) and artificial intelligence (AI) are the ideal solution for company management to comprehend consumer requirements and accomplish customer happiness. Therefore, using NLP and AI methods is crucial to the success of any organization.

No. of Pages : 11 No. of Claims : 3



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Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

(http://

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(http://ipindia.nic.in/index.htm)

Application Details	
APPLICATION NUMBER	202341067973
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	10/10/2023
APPLICANT NAME	1 . Ms.B.Sandhiya 2 . Dr.S.Rajashree 3 . Dr.A.Jemshia Miriam 4 . Dr. V. Saranya 5 . Ms.M.NafeesMuneera 6 . Ms.Hemalatha.S 7 . Ms.M.Vanathi 8 . Ms Karthika J 9 . Dr. Usama Abdurrahman 10 . Ms Saraswathi S
TITLE OF INVENTION	ENHANCED INTELLIGENT DRONE WITH AUTOMATIC WIRELESS CHARGING INFRASTRUCTURE SCHEDULING
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	ipopatentconnects@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	20/10/2023



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6317709

Grant date: 20 February 2024

Registration date: 08 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. POORNIMA DEVAN, Ms. ASHA RAJASEKARAN, Ms. RIDHI MAYURA

SHIVANI RAJESH, JOAN NIVEDA JOHN KENNEDY, Mrs. KATHAMBARI

PANNEER SELVAM, Ms. KARUNYA KRISHNAMURTHY, Mrs . BOBBY

MURUGESAN PARAMASAMY

in respect of the application of such design to:

ADVANCED ROBOTICS SYSTEM FOR AUTONOMOUS EXPLORATION AND

NAVIGATION

International Design Classification:

Version: 14-2023

Class: 15 MACHINES, NOT ELSEWHERE SPECIFIED

Subclass: 99 MISCELLANEOUS

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.



(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :29/08/2023

(21) Application No.202341057835 A

(43) Publication Date : 12/01/2024

(54) Title of the invention : ENHANCED FORENSIC INVESTIGATION USING FUZZIFICATION OF DIGITAL EVIDENCE

(51) International classification :G06F16/00, G06F21/00, G06N3/02, G06N7/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

1)N.Gopinath

Address of Applicant :B.S.ABDUR RAHMAN CRESCENT INSTITUTE OF SCIENCE & TECHNOLOGY, GST ROAD, VANDALUR, CHENNAI-600048. --

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)D.Poornima

Address of Applicant :Computer Science And Engineering, Sathyabama Institute of Science and Technology, Chennai,Tamilnadu -----

2)Deepshikha Bhatia

Address of Applicant :Computer Science and Information Technology, IIS (Deemed to be University). Jaipur. -----

3)N. Moganaragan

Address of Applicant :Department Of Computer Science And Engineering,Sri Manakula Vinayagar Engineering College, Ponicherry. -----

4)R.B.Saroo Raj

Address of Applicant :Department of Information Technology, Rajalakshmi Engineering College. Chennai. Tamilnnadu. -----

5)S. Santoshi Kumari

Address of Applicant :Add- Qtr. No. B4 Gaya College of Engineering,Sri krishna Nagar, Via - Buniyaadganj, khizersaral-823003 -----

6)Soma Rajwade

Address of Applicant :white jabbal house Shankar nagar Raipur Shri Rawatpura sarkar University raipur chattisgarh 492001 -----

7)Gokul Kumar Dewangan

Address of Applicant :Add- P2A 482 , sector 27-new raipur Shri rawatpura university raipur chhattisgarh-492018 -----

8)Prasanjit Singh

Address of Applicant :Computer Science And Engineering, Hindustan University, Chennai. Tamilnadu. -----

9)Kanchan S. Tiwari

Address of Applicant :Modern Education Society's college of Engineering , Pune,01 Maharashtra -----

10)N.Gopinath

Address of Applicant :B.S.Abdur Rahman Crescent Institute of Science & Technology, GST Road,Vandalur, Chennai —600 048.Tamil Nadu -----

(57) Abstract :

ENHANCED FORENSIC INVESTIGATION USING FUZZIFICATION OF DIGITAL EVIDENCE ABSTRACT Due to organizations employing network services and smart devices more frequently in their daily operations, digital forensic investigations involving such systems will necessitate increasingly sophisticated digital evidence gathering and processing. Because most network systems consist of numerous hardware and software components, security and privacy concerns may arise. Because only decisions based on the evidence will be made in digital forensics, the veracity of the data that has been acquired is essential. The quality of the evidence is crucial because if it is unreliable, the investigation will take the wrong turn. Additionally, noise interference reduces the reliability of the data, which leads to misguided directions for the research. The noise removal algorithm, which always increases accuracy, was used in the proposed work. On the other hand, combining block chain Systems with network based applications raises a number of issues because network data is trustworthy; honest, and responsive in real time. The acquired data will be organized in the suggested work in the form of fuzzy values, increasing the evidence's level of precision.

No. of Pages : 7 No. of Claims : 3



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6320778

Grant date: 08 January 2024

Registration date: 20 October 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Poornima Devan, Mrs. Sarojini Premalatha Jacob, Ms. Ridhi Mayura Shivani

Rajesh, Mrs. Scinthia Clarinda Samson Pakkianathan, Dr.Lalitha Devi

Kanniyappan, Mrs. Kathambari Panneer Selvam, Ms. Aishwarya Daniel

Kirubakaran, Ms. Gayathri Sivakumar, Mrs. Bobby Murugesan Paramasamy, Ms.

Karunya Krishnamurthy

in respect of the application of such design to:

WEARABLE ELECTRONIC DEVICE FOR BLIND PEOPLE

International Design Classification:

Version: 14-2023

Class: 16 PHOTOGRAPHIC, CINEMATOGRAPHIC AND OPTICAL
APPARATUS

Subclass: 06 OPTICAL ARTICLES

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.





Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6285142

Grant date: 05 June 2023

Registration date: 24 May 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Asha Pandian, Dr. Ankayarkanni Bagavathiappan, Dr. Prince Mary

Stanislaus, Dr. Albert Mayan John, Dr. Usha Nandini Duraisamy

in respect of the application of such design to:

Medical Device for Measuring Bodily Fluid in Neonates

International Design Classification:

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 02 MEDICAL INSTRUMENTS, INSTRUMENTS AND TOOLS FOR LABORATORY USE

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Intellectual
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Office

Certificate of Registration for a UK Design

Design number: 6303638

Grant date: 25 August 2023

Registration date: 14 August 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Mithileysh Sathiyarayanan, Raja Kothandaraman , Kavitha Duraipandian ,

Surya Vijayan, Deepanjali Chandrasekaran , Sharanya Rajan

in respect of the application of such design to:

AI-based Face Mask

International Design Classification:

Version: 14-2023

Class: 29 DEVICES AND EQUIPMENT AGAINST FIRE HAZARDS, FOR
ACCIDENT PREVENTION AND FOR RESCUE

Subclass: 02 DEVICES AND EQUIPMENT FOR ACCIDENT PREVENTION AND
FOR RESCUE, NOT ELSEWHERE SPECIFIED

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 01 APPARATUS AND EQUIPMENT FOR DOCTORS, HOSPITALS
AND LABORATORIES

Version: 14-2023

Class: 02 ARTICLES OF CLOTHING AND HABERDASHERY

Subclass: 03 HEADWEAR

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Intellectual Property Office

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Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6303639

Grant date: 25 August 2023

Registration date: 14 August 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Mithileysh Sathiyarayanan, Raja Kothandaraman , Kavitha Duraipandian ,

Surya Vijayan, Deepanjali Chandrasekaran , Sharanya Rajan

in respect of the application of such design to:

AI-based Face Helmet

International Design Classification:

Version: 14-2023

Class: 02 ARTICLES OF CLOTHING AND HABERDASHERY

Subclass: 03 HEADWEAR

Version: 14-2023

Class: 02 ARTICLES OF CLOTHING AND HABERDASHERY

Subclass: 03 HEADWEAR

Version: 14-2023

Class: 24 MEDICAL AND LABORATORY EQUIPMENT

Subclass: 01 APPARATUS AND EQUIPMENT FOR DOCTORS, HOSPITALS AND LABORATORIES

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Comptroller-General of Patents, Designs and Trade Marks

Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.





Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6296925

Grant date: 31 August 2023

Registration date: 18 July 2023

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Ms. Vaishnnave mala perumal, Ms. Bangaru kamatchi seethapathy, Ms. Deepa

Ayyapan, Dr.CHANAMALA VIJAY, Prof.(Dr.) Pankaj Kumar Sharma , Dr. Sheela

Selvakumari Natesan Arthanari, ADIROOBA SAMY HELDA MARY, Senthil

Kumar

in respect of the application of such design to:

SENSOR BASED DEVICE FOR MANAGING FINANCIAL DATA

International Design Classification:

Version: 14-2023

Class: 14 RECORDING, TELECOMMUNICATION OR DATA PROCESSING
EQUIPMENT

Subclass: 02 DATA PROCESSING EQUIPMENT AS WELL AS PERIPHERAL
APPARATUS AND DEVICES

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks
Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.





Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

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Application Details

APPLICATION NUMBER	202341032340
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	08/05/2023
APPLICANT NAME	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
TITLE OF INVENTION	"MANEUVERING LENS IN MOBILE GADGETS BY DINT OF SMART GLASS"
FIELD OF INVENTION	PHYSICS
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	info@humcen.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	08/05/2023
PUBLICATION DATE (U/S 11A)	16/06/2023

Application Status

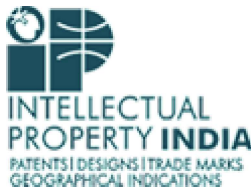
APPLICATION STATUS	Application referred u/s 12 for examination.
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Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

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(<http://ipindia.nic.in/index.htm>)

Application Details	
APPLICATION NUMBER	202341032348
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	08/05/2023
APPLICANT NAME	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
TITLE OF INVENTION	"AERO DELIVERY SYSTEM FOR DEED OF DELIVERY IN SURVEILLANCE, MILITARY AND POLICE DEPARTMENTS"
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	info@humcen.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	08/05/2023
PUBLICATION DATE (U/S 11A)	16/06/2023

Application Status	
APPLICATION STATUS	Application referred u/s 12 for examination.

			View Documents
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Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

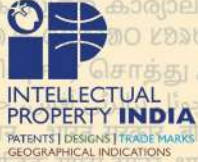
(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details

APPLICATION NUMBER	202341059273
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	04/09/2023
APPLICANT NAME	1 . Dr. Padma Mahadevan 2 . Dr. D. Saravanan 3 . Dr. Arul Prakash A 4 . Dr. V. Anuraadha 5 . Dr. G. Arunkumar 6 . Mr. Vijay Ramalingam 7 . Mr. S. Vignesh 8 . Dr. Harishchander Anandaram 9 . Mr. R. Rahin Batcha 10 . Mrs. Kakali Das
TITLE OF INVENTION	METHOD AND APPARATUS FOR REAL-TIME PERFORMANCE MONITORING AND EVALUATION OF TEAM MEMBERS
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	mail2patentipr@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	06/10/2023



ORIGINAL

क्रम सं/ Serial No. : 144943



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र

Certificate of Registration of Design

डिजाइन सं. / Design No.

391470-001

तारीख / Date

28/07/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **MEDICINAL TABLET FRIABILITY TESTING DEVICE** से संबंधित है, का पंजीकरण, श्रेणी 10-05 में 1.Dr. J. Refonaa 2. Dr. S.L.Jany Shabu 3.Dr.S.Dhamodaran 4.Dr. A. Porselvi के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-05 in respect of the application of such design to **MEDICINAL TABLET FRIABILITY TESTING DEVICE** in the name of 1.Dr. J. Refonaa 2. Dr. S.L.Jany Shabu 3.Dr.S.Dhamodaran 4.Dr. A. Porselvi.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 29/09/2023
Date of Issue



महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.



Intellectual
Property
Office

Certificate of Registration for a UK Design

Design number: 6338261

Grant date: 26 January 2024

Registration date: 08 January 2024

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. G.R. Annushakumar, Dr. Murali Malijeddi, Dr. Ramanjeet Singh, Dr. Dier

Salih Hasan, **Gayathri S**, Anusha P

in respect of the application of such design to:

Solid Waste Management System

International Design Classification:

Version: 14-2023

Class: 09 PACKAGING AND CONTAINERS FOR THE TRANSPORT OR
HANDLING OF GOODS

Subclass: 09 REFUSE AND TRASH CONTAINERS AND STANDS THEREFOR

Adam Williams

Comptroller-General of Patents, Designs and Trade Marks
Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.



Intellectual Property Office is an operating name of the Patent Office

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Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India



Application Details

APPLICATION NUMBER	202441010899
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	16/02/2024
APPLICANT NAME	1 . R.SASIREKHA 2 . K.PUNITHA 3 . R.RAMYABHARATHI 4 . MABEL NIRMALA JOSEPH 5 . S.B.DIVYA 6 . ELDHOSE K PAUL
TITLE OF INVENTION	LSTM-LINEAR REGRESSION FOR RAIN WATER LEVEL PREDICTION
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	23/02/2024



Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India



Application Details

APPLICATION NUMBER	202441025032
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	28/03/2024
APPLICANT NAME	1 . Dr. A. Yovan Felix 2 . Dr. S. Murugan 3 . Dr J. Jabez
TITLE OF INVENTION	IOT ENABLED REFRIGERATOR WITH WARMER CHAMBER
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	yovanfelix@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	28/03/2024
PUBLICATION DATE (U/S 11A)	05/04/2024

Application Status

APPLICATION STATUS

Application Awaiting Examination

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Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
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Government of India

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Application Details

APPLICATION NUMBER	202441001141
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	05/01/2024
APPLICANT NAME	1 . Dr.T.Judgi, Sathyabama Institute of Science and Technology, Chennai 2 . Dr.A.Christy, Sathyabama Institute of Science and Technology, Chennai 3 . Dr.A.C.Santha Sheela, Sathyabama Institute of Science and Technology, Chennai 4 . Dr.N.S.Usha, Sathyabama Institute of Science and Technology, Chennai 5 . Dr.Suja Cherukullapurath Mana, Sathyabama Institute of Science and Technology, Chennai
TITLE OF INVENTION	DECENTRALIZED ARTIFICIAL INTELLIGENCE-BASED MEDICAL DIAGNOSIS SYSTEM USING BLOCKCHAIN AND IOT DEVICES
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING
E-MAIL (As Per Record)	judginagarajan@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	09/02/2024

Application Status



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Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

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Application Details	
APPLICATION NUMBER	202441020896
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	20/03/2024
APPLICANT NAME	1 . Pathange Pavan Kumar 2 . Vishwajeet Anand 3 . Dr.S.Jayanthi 4 . Dr.E.Srividhya 5 . Joevita Faustina Doss F
TITLE OF INVENTION	A REAL-TIME HUMAN-MOBILE ROBOT INTERACTION SYSTEM BASED ON HAND GESTURE USING RASPBERRY PI
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	pavanppk448@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	29/03/2024

Application Status	
APPLICATION STATUS	Awaiting Request for Examination

			View Documents
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Office of the Controller General of Patents, Designs & Trade Marks
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Government of India



Application Details

APPLICATION NUMBER	202341075562
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	06/11/2023
APPLICANT NAME	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
TITLE OF INVENTION	METHOD FOR DEVELOPING E-BUSINESS IN AGRICULTURE SECTOR USING MOBILE APPLICATION
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	info@humcen.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	06/11/2023
PUBLICATION DATE (U/S 11A)	23/02/2024

Application Status



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Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India



Application Details

APPLICATION NUMBER	202341075562
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	06/11/2023
APPLICANT NAME	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
TITLE OF INVENTION	METHOD FOR DEVELOPING E-BUSINESS IN AGRICULTURE SECTOR USING MOBILE APPLICATION
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	info@humcen.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	06/11/2023
PUBLICATION DATE (U/S 11A)	23/02/2024

Application Status

PATENT OFFICE
INTELLECTUAL PROPERTY BUILDING
G.S.T. Road, Guindy, Chennai-600032
Tel No. (091)(044) 22502081-84 Fax No. 044 22502066
E-mail : Chennai-patent@nic.in
Web Site : www.ipindia.gov.in



C.B.R. NO : 200079

Date/Time :
04/04/2024

To

Dr.A.SIVASANGARI

**PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY, JEPPIAAR NAGAR, RAJIV GANDHI ROAD,
CHENNAI-600119, TAMIL NADU. sivasangarikavya@gmail.com 9840159890**

Sr No.	Reference Number	Application Number	Name of Article	Amount Paid	Amount Computed
1	412566-001	412566-001	CAP FOR EPILEPSY MONITORING/24-01	1000	1000

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Draft	ICICI Bank	007196	05/03/2024 00:00:00	1000

Note: This is electronically generated receipt hence no signature required.

Print CBR

Design Application Details

Application Number: 409651-001
Cbr Number: 200042
Cbr Date: 07/03/2024 15:15:01
Applicant Name:
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2. **DR. G. NAGARAJAN**
3. DR. JOHN DEVA PRASANNA D S
4. DR. SUJA CHERUKULLAPURATH MANA
5. DR. RONALD DONI

Design Application Status

Application Status: Application Accepted, Certificate of Design not Generated.

[Back](#)

Urkunde

über die Eintragung des
Gebrauchsmusters Nr. 20 2024 100 572

Bezeichnung:

Wetterüberwachungs- und Frühwarnsystem mit IoT-fähigen Geräten und drahtlosem 5G-Kommunikationsnetzwerk

IPC:

G01W 1/10

Inhaber/Inhaberin:

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Doni, Ronald, Dr., Chennai, Tamil Nadu, IN
Govindan, Nagarajan, Dr., Chennai, Tamil Nadu, IN
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Sundar Raj, Prayla Shyry, Dr., Chennai, Tamil Nadu, IN

Tag der Anmeldung:

06.02.2024

Tag der Eintragung:

21.02.2024

Die Präsidentin des Deutschen Patent- und Markenamts



Eva Schewior

München, 21.02.2024



(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/12/2023

(21) Application No.202341088351 A

(43) Publication Date : 12/01/2024

(54) Title of the invention : GESTURE BASED ELECTRONIC GADGET OPERATING SYSTEM

(51) International classification :G06F0003010000, G06F0003030000, G06F0003042000, G06F0003041000, A47B0096020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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Name of Applicant : NA

Address of Applicant : NA

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(57) Abstract :

A gesture based electronic gadget operating system, comprises of frame 1 having base plate 2, a fixed plate 3 and movable plate 4 embedded within frame 1 for placing electronic gadget in between plates, plurality of suction units 5 arranged underneath base plate 2 for affixing base plate 2 with surface, a laser measurement sensor mapped on frame 1 for detecting dimensions of gadget, a sliding arrangement 6 mapped in between fixed and movable plate 4 for providing movement to movable plate 4, an artificial intelligence based imaging unit 7 mapped on frame 1 for capturing multiple images of user, a circular member 11 configured with a touch interactive display panel 12, , an eye-gauge sensor paired with imaging unit 7 for detecting blink rate of user's eyes, and an audio unit 13 mapped on fame for notifying user to halt/ stop using gadget.

No. of Pages : 16 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/06/2024

(21) Application No.202441044112 A

(43) Publication Date : 21/06/2024

(54) Title of the invention : FRAMEWORK FOR THE INTRUSION DETECTION OF CYBERSECURITY ATTACKS BASED ON DATA MINING AND MACHINE LEARNING

(51) International classification :G06N0020000000, G06K0009620000, G06F0021550000, G06N0020200000, H04L0061451100

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
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3)Mr.R.Senthilkumar
4)Dr. Mohammad Shahid
5)Dr.G.Sujatha
6)Dr. A.Syed Musthafa
7)Dr. J K Periasamy
Name of Applicant : NA
Address of Applicant : NA
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2)Mrs.R.Ramya
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3)Mr.R.Senthilkumar
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4)Dr. Mohammad Shahid
Address of Applicant :Associate Professor, Head of CSE(AIML), Noida Institute of Engineering and Technology, Greater Noida, UP 201306 -----
5)Dr.G.Sujatha
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6)Dr. A.Syed Musthafa
Address of Applicant :Professor, Department of Information Technology, M.Kumarasamy College of Engineering, Karur, Tamil Nadu- 639 113, India -----
7)Dr. J K Periasamy
Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Sri Sai Ram Engineering College, Chennai 600044, Tamil Nadu, India -----

(57) Abstract :

The present invention relates to a framework for the detection of cybersecurity attacks using data mining and machine learning techniques. The framework provides a comprehensive solution for identifying and mitigating various types of cybersecurity threats in real-time. It utilizes a combination of supervised and unsupervised learning algorithms to analyze network traffic data and detect anomalies indicative of potential attacks. The invention includes a preprocessing module, a feature selection module, a classifier module, and a response module to efficiently and effectively detect and respond to cybersecurity threats. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 9



ORIGINAL
रजि. सं. / Serial No. : 172960



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 415407-001

तारीख / Date : 30/04/2024

परस्परिकता तारीख / Reciprocity Date* :

देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **BLOCKCHAIN BASED MEDICAL DATA STORAGE DEVICE** से संबंधित है, का पंजीकरण, श्रेणी 14-02 में 1.Dr S.Lakshmisridevi 2. Dr.B. **Shamreen Ahamed** 3.Mr.P.Krishnamoorthy 4.Dr.K.Kalaiselvi 5.Ms. A. Yuvarani 6.Dr.D.Amuthaguka 7.Dr.R. Lathamanju के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-02 in respect of the application of such design to **BLOCKCHAIN BASED MEDICAL DATA STORAGE DEVICE** in the name of 1.Dr S.Lakshmisridevi 2. Dr.B. Shamreen Ahamed 3.Mr.P.Krishnamoorthy 4.Dr.K.Kalaiselvi 5.Ms. A. Yuvarani 6.Dr.D.Amuthaguka 7.Dr.R. Lathamanju.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue : 13/06/2024



वसंत श्री शिंदे

महानिदेशक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*परस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन वर स्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पांच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441006557 A

(19) INDIA

(22) Date of filing of Application :31/01/2024

(43) Publication Date : 09/02/2024

(54) Title of the invention : AUTOMATION OF INJECTION VEHICLE BASED ON MACHINE VISION AND MULTIPLE SENSOR DATA FUSION

(51) International classification :G01C0021160000, G06K0009620000, G01S0013860000, G01S0013931000, G01S0017890000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. B. Shamreen Ahamed Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Chennai ----- 2)Ramyabharathi. R 3)Punitha K 4)Dr. D. Poornima 5)Dr. J. Anix Joel Singh 6)Mr. A. Vetrivel Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. B. Shamreen Ahamed Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Chennai ----- 2)Ramyabharathi. R Address of Applicant :Assistant Professor, Department of Computer Science and Engineering Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Chennai ----- 3)Punitha K Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Chennai ----- 4)Dr. D. Poornima Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Chennai ----- 5)Dr. J. Anix Joel Singh Address of Applicant :Associate Professor, Department of Mechanical Engineering, St. Joseph University, Tanzania ----- 6)Mr. A. Vetrivel Address of Applicant :Assistant Professor, Department of Mechanical Engineering, SNS College of Technology, Coimbatore -----
---	--

(57) Abstract :

A fusion method was created to best merge the vehicle detection data from the two sensors in order to improve the vehicle detection capacity. Three primary processes comprise the proposed sensor fusion algorithm: vehicle tracking, data association, and vehicle motion estimate. The technique of merging observations from several separate sensors to produce a comprehensive and reliable depiction of a process or environment of interest is known as multisensor data fusion. Numerous robotics applications, including object recognition, environment mapping, and localization, heavily rely on data fusion. Robots can detect and interact with their surroundings more efficiently when data from many sensor types such as cameras, LIDAR, ultrasonic sensors, and inertial measurement units are combined.

No. of Pages : 13 No. of Claims : 1

पेटेंट कार्यालय
शासकीय जर्नल

**OFFICIAL JOURNAL
OF
THE PATENT OFFICE**

निर्गमन सं. 46/2023
ISSUE NO. 46/2023

शुक्रवार
FRIDAY

दिनांक: 17/11/2023
DATE: 17/11/2023

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.

(PROF. (DR) UNNAT P. PANDIT)
CONTROLLER GENERAL OF PATENTS, DESIGNS & TRADE MARKS

17nd NOVEMBER, 2023

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INTRODUCTION TO DESIGN PUBLICATION	:	77773
COPYRIGHT PUBLICATION	:	77774
REGISTRATION OF DESIGNS	:	77775 - 77959

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341075529 A

(19) INDIA

(22) Date of filing of Application :06/11/2023

(43) Publication Date : 17/11/2023

(54) Title of the invention : REAL TIME SMART SENSING TRAFFIC CONTROL SYSTEM FOR EMERGENCY VEHICLES USING RFID

(51) International classification :G06K0007100000, G08G0001087000, G08G0001096500, G08G0001010000, G06Q0050000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY Address of Applicant :jeppiaar Nagar,Rajiv Gandhi Road,Chennai-600119, TamilNadu,India ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)G. SUNDARI Address of Applicant :PROFESSOR DEPARTMENT OF ECE, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, India PIN- 600119 -- ----- 2)T.BERNATIN Address of Applicant :Associate Professor, Depanment of ECE, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nadu, Lndia PIN- 6001 19 - -----
---	--

(57) Abstract :

Accordingly, embodiments herein disclose a real time smart sensing traffic control system for emergency vehicles using radio frequency identification (RFID). The proposed system comprises radio frequency identification (RFID) readers and ultrasonic sensors installed at key locations, and unique RFID tags which designed to verify emergency vehicles and trigger signal changes at a very faster rate, while the ultrasonic sensors help determine traffic density. The RFID readers activate the RFID tags using radio waves when the; 'rescue vehicle is nearby. Further, the proposed system may include a centralized control centre configured to manage the system and processes the captured data from the ultrasonic sensors. The centralized control centre assigns the high priority to the emergency vehicles and adjusts traffic signals accordingly. The proposed system accurately and continuously manages traffic at every intersection, and prevents the traffic density and allows the emergency vehicles to arrive at the appropriate time, saving human lives.

No. of Pages : 11 No. of Claims : 5

FORM 1 THE PATENTS ACT 1970 (39 of 1970) & The Patent Rules, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 & 135, and rule 20(1))		(FOR OFFICE USE ONLY) Application No: Filing Date: Amount of fee paid: CBR No: Signature:	
		 710048675	
		Application No.	202341075529
		Filing date:	06-11-2023
		Amount of Fee Paid	1750/-
		CBR No.	50987
		Signature	<i>[Signature]</i> 06/11/23
1. APPLICANT'S REFERENCE/ IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)			
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]			
☒ Ordinary (✓) ☐ Divisional ()		☐ Convention () ☐ Divisional ()	
☐ Patent of Addition ()		☐ PCT - NP () ☐ Divisional () ☐ Patent of Addition ()	
3A. APPLICANT(S)			
NAME IN FULL	NATIONALITY	COUNTRY OF RESIDENCE	ADDRESS OF THE APPLICANT
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3B CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]			
☐ Natural Person ()		☐ Other than Natural Person	
		☐ Small Entity ()	☐ Startup ()
		☒ Educational Institution (✓)	
4. INVENTOR(S) [Please tick (✓) at the appropriate category]			
Are all the inventor(s) same as the applicant(s) named above?	☐ Yes ()		☒ No (✓)
If "No", furnish the details of the inventors(s)			
Name in Full	Nationality	Country of Residence	Address for inventor
G.SUNDARI	INDIAN	INDIA	Professor, Department of ECE,

06-Nov-2023/118999/202341075529/Form 1

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5. TITLE OF THE INVENTION

"REAL TIME SMART SENSING TRAFFIC CONTROL SYSTEM FOR EMERGENCY VEHICLES
USING RFID"

6. AUTHORISED REGISTERED PATENT AGENT(S)	IN/PA No.	Nil
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7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA	Name	Dr.T. SASIPRABA
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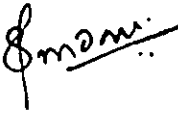
8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION

Country	Application Number	Filing Date	Name of the Applicant	Title of the Invention	IPC (as classified in the convention country)
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N.A.

9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)

PATENT OFFICE CHENNAI 08/11/2023 09:50

International application number	International filing date
N.A.	
10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION	
Original (first) application number	Date of filing of Original (first) application number
N.A.	
8. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT	
Main application/ Patent Number	Date of Filing of main application
N.A.	
9. DECLARATIONS:	
i) Declaration by the inventor(s):	
I, the below-named inventor am the true and the first inventor for this invention.	
(a) Date:	
(b) Signature of the inventor: 	
(c) Name: G.SUNDARI	
I, the below-named inventor am the true and the first inventor for this invention.	
(a) Date:	
(b) Signature of the inventor: 	
(c) Name : T.BERNATIN	
ii) Declaration by the applicant(s) in the convention country	
NIL	

iii) Declaration by the applicant(s):

I/We, the applicant(s) hereby declare(s) that:-

- ☒ I/We am in possession of the above mentioned invention.
- ☒ The Complete specification relating to the invention is filed with this application.
- ☐ The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of the patent to me/us.
- ☒ There is no lawful ground of objection to the grant of the patent to me/us.
- ☒ I/We are the true and first inventors.
- ☒ I am / we are the assignee or legal representative of true and first inventor(s).
- ☐ The application or each of the application, particulars of which are given in Paragraph 8 was the first application in convention country/countries in respect of my/our invention.
- ☐ I/We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/We derive the title.
- ☐ My/Our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph 9.
- ☐ The application is divided out of my/our application particulars of which are given in Paragraph 10 and pray that this application may be treated as deemed to have been filed on.....under section 16 of the Act.
- ☐ The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph 11

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

(a) Form 2

Item	Details	Fee	Remarks
Complete Specification	10 pages	Rs. 1600/-	
No. of Claim(s)	5 Claims; 2 Page		
Abstract	1 Page		
No. of Drawings	1		

- (b) Statement and Undertaking (Form 3)
(c) Declaration of inventorship (Form 5)
(d) Request for Early Publication (Form 9)
(e) Request for Early Examination (Form 18)
(f) Educational Institution Proof (Form 28)

Fee Rs. 8900/- (Eight Thousand and Nine hundred Only) in Demand Draft bearing no: 005834 dated 03/11/2023 drawn from HDFC bank, Perumbakkam Branch.

We hereby declare that to the best of our knowledge, information, and belief that the fact and matters stated herein are correct and we request that a patent may be granted to us for the said invention

Dated this _____ day of _____ 2023

Signature(s)



Dr.T. SASIPRABA
Vice Chancellor,
Sathyabama Institute of Science and Technology,
Chennai-600119

To,
The Controller of Patents,
Patent Office Chennai,
Chennai – 600 032.

PATENT OFFICE CHENNAI 08/11/2023 09:50



710048676

FORM 2

The Patent Act 1970

(39 of 1970)

&

The Patent Rules, 2005

**COMPLETE SPECIFICATION
(SEE SECTION 10 AND RULE 13)**

TITLE OF THE INVENTION

**“REAL TIME SMART SENSING TRAFFIC CONTROL SYSTEM FOR
EMERGENCY VEHICLES USING RFID”**

APPLICANTS:

Name : Sathyabama Institute of Science and Technology
Nationality : Indian Educational Institution
Address : Sathyabama Institute of Science and Technology,
Rajiv Gandhi Salai, Jeppiaar Nagar,
Chennai, Tamil Nādu, India. PIN- 600119

The following specification particularly describes and ascertains the nature of this invention and the manner in which it is to be performed: -

“REAL TIME SMART SENSING TRAFFIC CONTROL SYSTEM FOR EMERGENCY VEHICLES USING RFID”

FIELD OF INVENTION

[0001] The present disclosure relates to a real time smart sensing traffic control system for emergency vehicles using radio frequency identification (RFID). Further, the real time smart traffic control system is designed to optimize the passage of emergency vehicles through urban and highway traffic using RFID and advanced sensor technologies.

BACKGROUND OF INVENTION

[0002] Traffic lights are crucial for managing the flow of vehicles on the road. Traffic signals are operated based on the dense of the traffic and control emergency vehicles are to identify these vehicles, control traffic lights, and facilitate a clear path for their travel with minimal delay. This approach establishes a connection between emergency vehicles and traffic signals, RFID as its main element for implementation. RFID tags are utilized to verify emergency vehicles and trigger signal changes at a very faster rate, while ultrasonic sensors help determine traffic density. As the emergency vehicle approaches the traffic signal, the system dynamically adjusts the signal to allow the vehicle to clear all junctions without unnecessary delays. The process continues until the emergency vehicle safely reaches its destination, with the entire system operating autonomously, without the need for human intervention.

[0003] Hence, the proposed system is to minimize response times, enhance road safety, and improve the overall efficiency of emergency services during critical situations.

[0004] Thus, it is desired to address the above-mentioned disadvantages or other shortcomings or at least provide a useful alternative.

OBJECTIVE OF INVENTION

[0005] The principal object of the embodiments herein is to optimize the passage of emergency vehicles through urban and highway traffic using RFID and advanced sensor technologies.

[0006] Another object of the embodiments herein is to minimize response times, enhance road safety, and improve the overall efficiency of emergency services during critical situations.

[0007] Another object of the embodiments herein is simple and cost effective system.

5 SUMMARY OF INVENTION

[0008] The following presents a simplified summary in order to provide a basic understanding of some aspects of the disclosed invention. This summary is not an extensive overview, and it is not intended to identify key/critical elements or to delineate the scope thereof. Its sole purpose is to present some concepts in a simplified form as a
10 prelude to the more detailed description that is presented later.

[0009] Accordingly, there is provided to a real time smart sensing traffic control system for emergency vehicles using radio frequency identification (RFID). Further, the real time smart traffic control system is designed to optimize the passage of emergency vehicles through urban and highway traffic using RFID and advanced sensor
15 technologies.

[0010] In accordance with an embodiment of the present subject matter relates to a real time smart sensing traffic control system for emergency vehicles using radio frequency identification (RFID). The proposed system comprises radio frequency identification (RFID) readers and ultrasonic sensors installed at key locations, and unique RFID tags
20 which designed to verify emergency vehicles and trigger signal changes at a very faster rate, while the ultrasonic sensors help determine traffic density. The RFID readers activate the RFID tags using radio waves when the rescue vehicle is nearby. Further, the proposed system may include a centralized control centre configured to manage the system and processes the captured data from the ultrasonic sensors. The centralized
25 control centre assigns the high priority to the emergency vehicles and adjusts traffic signals accordingly.

[0011] Accordingly, the proposed system accurately and continuously manages traffic at every intersection, helps to lessen congestion in areas with high traffic, which lessens

accidents by preserving public life, and prevents the traffic density and allows the emergency vehicles to arrive at the appropriate time, saving human lives.

[0012] These and other aspects of the embodiments herein will be better appreciated and understood when considered in conjunction with the following description and the accompanying drawings. It should be understood, however, that the following descriptions, while indicating preferred embodiments and numerous specific details thereof, are given by way of illustration and not of limitation. Many changes and modifications may be made within the scope of the embodiments herein without departing from the scope thereof, and the embodiments herein include all such modifications.

BRIEF DESCRIPTION OF FIGURES

[0013] These and other features, aspects and advantages of the present invention will be better understood if the following detailed description is read with reference to the accompanying drawings, in which like characters represent like parts in the drawings, where:

[0014] Figure 1 illustrates schematic block diagram of real time smart sensing traffic control system for emergency vehicles, according to the present invention.

[0015] It will be understood by those skilled in the art that the elements in the drawings are shown for convenience and have not necessarily been drawn to scale. For example, the flowcharts illustrate the process using key steps to enhance understanding of aspects of the present invention. In addition, one or more components of the device may be represented in the drawings by conventional symbols, and the drawings may show only the specific details relevant to an understanding of embodiments of the present invention, so as not to clutter the drawings with details that are readily apparent to those skilled in the art who are familiar with the present description.

DETAILED DESCRIPTION OF INVENTION

[0016] The embodiments herein and the various features and advantageous details thereof are explained more fully with reference to the non-limiting embodiments that are illustrated in the accompanying drawings and detailed in the following description.

Descriptions of well-known components and processing techniques are omitted so as to not unnecessarily obscure the embodiments herein. Also, the various embodiments described herein are not necessarily mutually exclusive, as some embodiments can be combined with one or more other embodiments to form new embodiments. The term
5 "or" as used herein, refers to a non-exclusive or, unless otherwise indicated. The examples used herein are intended merely to facilitate an understanding of ways in which the embodiments herein can be practiced and to further enable those skilled in the art to practice the embodiments herein. Accordingly, the examples should not be construed as limiting the scope of the embodiments herein.

10 [0017] The accompanying drawings are used to help easily understand various technical features and it should be understood that the embodiments presented herein are not limited by the accompanying drawings. As such, the present disclosure should be construed to extend to any alterations, equivalents and substitutes in addition to those which are particularly set out in the accompanying drawings. Although the terms first,
15 second, etc. may be used herein to describe various elements, these elements should not be limited by these terms. These terms are generally only used to distinguish one element from another.

[0018] Accordingly, embodiments here are provided to a real time smart sensing traffic control system for emergency vehicles using radio frequency identification (RFID).
20 Further, the real time smart traffic control system is designed to optimize the passage of emergency vehicles through urban and highway traffic using RFID and advanced sensor technologies.

[0019] Referring Figure 1 illustrates schematic block diagram of real time smart sensing traffic control system for emergency vehicles. The system comprises radio frequency
25 identification (RFID) readers and ultrasonic sensors installed at key locations, and unique RFID tags which designed to verify emergency vehicles and trigger signal changes at a very faster rate, while the ultrasonic sensors help determine traffic density. The RFID readers activate the RFID tags using radio waves when the rescue vehicle is nearby.

[0020] Accordingly, the RFID readers as its main element for implementation. The RFID tags are utilized to verify emergency vehicles and trigger signal changes at a very faster rate, while ultrasonic sensors help determine traffic density. In this approach involves placing the RFID readers at the signal and attaching the RFID tags to the emergency vehicles. The RFID readers activate the tags using radio waves when the rescue vehicle is nearby. When the tags are activated, a wave is emitted, which returns to the antenna and is transformed into data, the reader can read. The emergency vehicle will cause the signals to change from red to green in the lane where it is detected. The traffic management system in place is already effective, but it takes a lot of time.

[0021] The proposed system utilizes both RFID readers and RFID tags. The RFID readers are installed at the traffic signal, and the RFID tags are affixed to the emergency vehicles. When emergency vehicles approach the signal point, the RFID readers activate the tags through radio waves. Once activated, the tags emit a wave that returns to the antenna and is converted into readable data by the reader. Consequently, the detection of an emergency vehicle triggers a change in traffic signal from red to green in the respective lane, without delay.

[0022] In this proposed system integrates RFID and Ultrasonic sensors, with the ultrasonic sensors installed alongside the RFID readers at the traffic signal. This combination allows for efficient traffic management based on real-time traffic density.

The ultrasonic sensor measures the density of vehicles in each lane, enabling the system to identify the lane with the highest density. When the emergency vehicle approaches the traffic signal, the RFID readers detect its presence and give it priority. As a result, the lane occupied by the emergency vehicle is immediately given a green signal, while the other lanes display red signals. Additionally, the ultrasonic sensor continuously monitors traffic density and adjusts the signals accordingly, ensuring that the emergency vehicle can safely and swiftly navigate through the least congested lane..

[0023] The yellow signal delay is set at five seconds, and conventionally traffic signals cycle every 45 seconds which is fixed. In this proposed system, cycle time is dynamic and RFID readers are positioned at a distance of twenty meters from each signal line

along the path. An ultra-high-frequency RFID module operating at 433 MHz with a range of 100 meters is employed to detect emergency vehicles in the particular signal lane. Upon detecting an emergency vehicle, the RFID reader initiates the process. Then the ultrasonic sensors are placed alongside the RFID readers. These ultrasonic sensors
5 operate in the popular range of 40 to 70 kHz, capable of detecting objects at a distance of approximately 11 meters.

[0024] Accordingly, the proposed system may include a centralized control centre configured to manage the system and processes the captured data from the ultrasonic sensors. The centralized control centre assigns the high priority to the emergency
10 vehicles and adjusts traffic signals accordingly.

[0025] The foregoing description of the specific embodiments will so fully reveal the general nature of the embodiments herein that others can, by applying current knowledge, readily modify and/or adapt for various applications such specific
15 embodiments without departing from the generic concept, and, therefore, such adaptations and modifications should and are intended to be comprehended within the meaning and range of equivalents of the disclosed embodiments. It is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation. Therefore, while the embodiments herein have been described in terms of preferred embodiments, those skilled in the art will recognize that the
20 embodiments herein can be practiced with modification within the spirit and scope of the embodiments as described herein.

CLAIMS

We claim:

1. A real time smart sensing traffic control system for emergency vehicles using radio frequency identification (RFID), comprising of:
 - radio frequency identification (RFID) readers and ultrasonic sensors installed at key locations;
 - unique RFID tags which is designed to verify emergency vehicles and trigger signal changes at a very faster rate, while the ultrasonic sensors help determine traffic density, wherein the RFID readers activate the RFID tags using radio waves when the rescue vehicle is nearby;
 - a centralized control centre which is configured to manage the system and processes the captured data from the ultrasonic sensors, wherein the centralized control centre assigns the high priority to the emergency vehicles and adjusts traffic signals accordingly;
 - wherein the traffic signals return to normal operation once the vehicle passes;
 - and
 - wherein the system accurately and continuously manages traffic at every intersection, helps to lessen congestion in areas with high traffic, which lessens accidents by preserving public life, and prevents the traffic density and allows the emergency vehicles to arrive at the appropriate time, saving human lives.
2. The real time smart sensing traffic control system as claimed in the claim 1, wherein the unique RFID tags are equipped with the emergency vehicles.
3. The real time smart sensing traffic control system as claimed in the claim 1, wherein the ultrasonic sensors measure the density of emergency vehicles in each lane, and enabling the system to identify the lane with the highest density.
4. The real time smart sensing traffic control system as claimed in the claim 1, wherein the ultrasonic sensors continuously monitor the traffic density and adjust the signals accordingly, and ensuring that the emergency vehicles can safely and swiftly navigate through the least congested lane.

5. The real time smart sensing traffic control system as claimed in the claim 1, wherein the ultrasonic sensors operate in the popular range of 40 to 70 kHz, and capable of detecting objects at a distance of approximately 11 meters.

ABSTRACT

“REAL TIME SMART SENSING TRAFFIC CONTROL SYSTEM FOR EMERGENCY VEHICLES USING RFID”

Accordingly, embodiments herein disclose a real time smart sensing traffic control system for emergency vehicles using radio frequency identification (RFID). The proposed system comprises radio frequency identification (RFID) readers and ultrasonic sensors installed at key locations, and unique RFID tags which designed to verify emergency vehicles and trigger signal changes at a very faster rate, while the ultrasonic sensors help determine traffic density. The RFID readers activate the RFID tags using radio waves when the rescue vehicle is nearby. Further, the proposed system may include a centralized control centre configured to manage the system and processes the captured data from the ultrasonic sensors. The centralized control centre assigns the high priority to the emergency vehicles and adjusts traffic signals accordingly. The proposed system accurately and continuously manages traffic at every intersection, and prevents the traffic density and allows the emergency vehicles to arrive at the appropriate time, saving human lives.

Figure to be published with Abstract: Figure 1

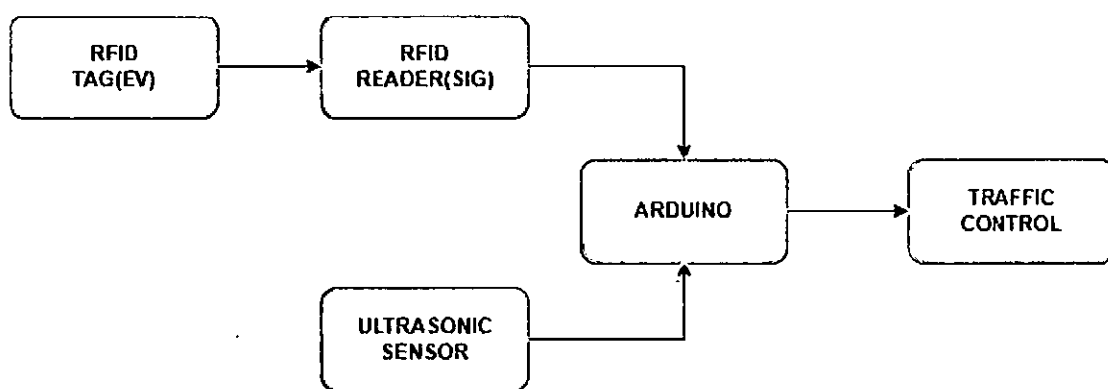


FIGURE 1

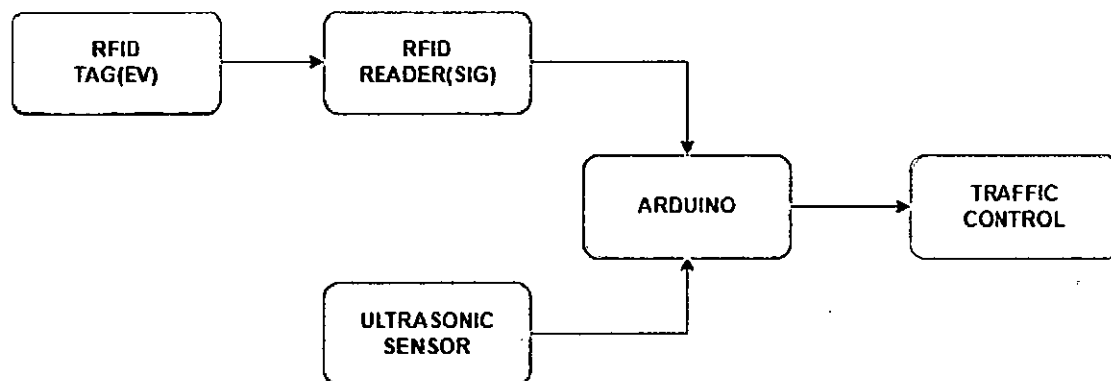


FIGURE 1

Signature

Dr.T. SASIPRABA

Vice Chancellor,

Sathyabama Institute of Science and Technology,

Chennai-600119



WORLD'S FIRST IP COMPANY THAT BACKED
WORLD RECORD IN PATENT FILING

HUMCEN GLOBAL PVT LTD., INDIA

STRATEGIC PATENT CONSULTING PARTNER

FORM 1 THE PATENTS ACT 1970 (39 of 1970) & The Patent Rules, 2003 APPLICATION FOR GRANT OF PATENT (See section 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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	Application No.	202341032328
	Filing date:	08/05/2023
	Amount of Fee Paid	1750/-
	CBR No.	20532
	Signature	P.V. 08/05/23

1. APPLICANT'S REFERENCE/ IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)	
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2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT - NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()

3A. APPLICANT(S)			
NAME IN FULL	NATIONALITY	COUNTRY OF RESIDENCE	ADDRESS OF THE APPLICANT
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY	INDIAN EDUCATIONAL INSTITUTION	INDIA	Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, PIN- 600119 Tamil Nādu, India

3B CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]			
Natural Person ()		Other than Natural Person	
	Small Entity ()	Startup ()	Educational Institution (✓)

4. INVENTOR(S) [Please tick (✓) at the appropriate category]		
Are all the inventor(s) same as the applicant(s) named above?	Yes ()	No (✓)

If "No", furnish the details of the inventors(s)			
Name in Full	Nationality	Country of Residence	Address for inventor
Dr. M. Sumathi	INDIAN	INDIA	Professor, Department of ECE, Sathyabama Institute of Science and

08-May-2023/45665/202341032328/Form 1

			Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nādu, India. PIN- 600119
Dr. T. Sasiprabha	INDIAN	INDIA	Vice Chancellor, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nādu, India PIN- 600119
Ms. Ishwarya. C	INDIAN	INDIA	Junior Research Fellow (JRF), Department of ECE, Sathyabama Institute of Science and Technology, Rajiv Gandhi Salai, Jeppiaar Nagar, Chennai, Tamil Nādu, India, PIN- 600119

5. TITLE OF THE INVENTION

“METHOD FOR DETECTION OF POLYCYSTIC OVARY SYNDROME USING ANDROID APP”

6. AUTHORISED REGISTERED PATENT AGENT(S)

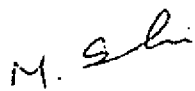
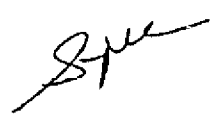
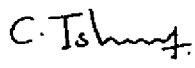
IN/PA No.	Nil
Name	Nil
Mobile No.	Nil

7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA

Name	Dr.T. SASIPRABA
Postal Address	Vice Chancellor, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Rajiv Gandhi Road, Chennai- 600119, TamilNadu, India.
Telephone No	NA
Mobile No.	8124281241
Fax No.	NA
E-mail:	info@humcen.com

8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION

PATENT OFFICE CHENNAI 16/05/2023 14:17

Country	Application Number	Filing Date	Name of the Applicant	Title of the Invention	IPC (as classified in the convention country)
N.A.					
9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)					
International application number			International filing date		
N.A.					
10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION					
Original (first) application number			Date of filing of Original (first) application number		
N.A.					
8. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT					
Main application/ Patent Number			Date of Filing of main application		
N.A.					
9. DECLARATIONS:					
i) Declaration by the inventor(s):					
I, the below-named inventor am the true and the first inventor for this invention.					
(a) Date:					
(b) Signature of the inventor: 					
(c) Name: Dr. M. Sumathi					
I, the below-named inventor am the true and the first inventor for this invention.					
(a) Date:					
(b) Signature of the inventor: 					
(c) Name : Dr. T. Sasiprabha					
I, the below-named inventor am the true and the first inventor for this invention.					
(a) Date:					
(b) Signature of the inventor: 					
(c) Name : Ms. Ishwarya. C					
ii) Declaration by the applicant(s) in the convention country					
NIL					

iii) Declaration by the applicant(s):

I/We, the applicant(s) hereby declare(s) that:-

- ✓ I/We am in possession of the above mentioned invention.
- ✓ The Complete specification relating to the invention is filed with this application.
- ☐ The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of the patent to me/us.
- ✓ There is no lawful ground of objection to the grant of the patent to me/us.
- ✓ I/We are the true and first inventors.
- ✓ I am / we are the assignee or legal representative of ture and first inventor(s).
- ☐ The application or each of the application, particulars of which are given in Paragraph 8 was the first application in convention country/countries in respect of my/our invention.
- ☐ I/We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/We derive the title.
- ☐ My/Our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph 9.
- ☐ The application is divided out of my/our application particulars of which are given in Paragraph 10 and pray that this application may be treated as deemed to have been filed on.....under section 16 of the Act.
- ☐ The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph 11

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

(a) Form 2

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No. of Claim(s)	4 Claims; 1 Page		
Abstract	1 Page		
No. of Drawings	3		

(b) Statement and Undertaking (Form 3)

(c) Declaration of inventorship (Form 5)

(d) Request for Early Publication (Form 9)

(e) Request for Early Examination (Form 18)

(f) Educational Institution Proof (Form 28)

Fee Rs. 8900/- (Eight Thousand and Nine hundred Only) in Demand Draft bearing no: 005638 dated 04/05/2023 drawn from HDFC bank, Perumbakkam Branch.

We hereby declare that to the best of our knowledge, information, and belief that the fact and matters stated herein are correct and we request that a patent may be granted to us for the said invention

Dated this _____ day of _____ 2023

Applicant Signature



Dr.T. SASIPRABA
Vice Chancellor,
Sathyabama Institute of Science and Technology,
Chennai-600119

To,
The Controller of Patents,
Patent Office Chennai,
Chennai – 600 032.

PATENT OFFICE CHENNAI 16/05/2023 14:17



FORM 2

The Patent Act 1970

(39 of 1970)

&

The Patent Rules, 2005

**COMPLETE SPECIFICATION
(SEE SECTION 10 AND RULE 13)**

TITLE OF THE INVENTION

**“METHOD FOR DETECTION OF POLYCYSTIC OVARY SYNDROME USING
ANDROID APP”**

APPLICANTS:

Name : Sathyabama Institute of Science and Technology

Nationality : Indian Educational Institution

Address : Sathyabama Institute of Science and Technology,
Rajiv Gandhi Salai, Jeppiaar Nagar,
Chennai, Tamil Nādu, India. PIN- 600119

The following specification particularly describes and ascertains the nature of this invention and the manner in which it is to be performed: -

“METHOD FOR DETECTION OF POLYCYSTIC OVARY SYNDROME USING ANDROID APP”

FIELD OF INVENTION

[0001] The present disclosure relates to a method for detection of polycystic ovary syndrome (PCOS) using android app.

BACKGROUND OF INVENTION

5 [0002] The polycystic ovary syndrome (PCOS) is an endocrine illness that is common in women of reproductive age and is linked to issues with infertility, diabetes mellitus, and cardiovascular disease. Imaging characteristics are the primary means of making the diagnosis and nowadays, the use of sophisticated smart phones and telemedicine both play significant roles in the health industry. Modern technology has made it possible to
10 diagnose several ailments using video calls and other smart innovations, like smart watches and other ambulatory devices. The use of ultrasound imaging in PCOS diagnosis has grown significantly during image study. The follicles' tendency to overlap, the equipment's inherent noise, and the operator's lack of skill in what is essentially an experience-dependent technique make the image's distinctive look more difficult and the
15 diagnosis process time-consuming. The aforementioned parameters have an impact on cyst detection accuracy. To prevent infertility, early and accurate detection of abnormalities in the female reproductive system is necessary prior to therapy.

[0003] Typically, the existing standard diagnostic test for detection of PCOS is “ultrasound”. However, there are many inherent drawbacks of image acquisition and
20 preprocessing. Hence a suitable method to circumvent the problem is very much needed for effective diagnosis. Inexperienced ultra-sonographers & gynecologist face difficulties in differentiating among different types of cysts resulting in lower rate of correct diagnosis. Incorrect diagnosis can result in unnecessary biopsies/surgery. Hence, it is necessary to hypothesize that the executable software will bring ease of precise
25 detection of PCOS differentially and aid in clear diagnosis and treatment regimen.

[0004] Therefore, the proposed invention aims to develop an AI based automated PCOS diagnostic system with mobile App. The development of healthcare apps. is essential one and has played an integral role in empowering women patients with quick information, therefore it is a type of self-examination study. Women also feel at ease by using healthy lifestyle apps and health monitoring apps to keep themselves in check regularly. Mobile applications not only help patients but also allow doctors to gather and store personal health data in a hassle-free manner. With digitization, it is necessary for the healthcare industry that needs to have improvement in patient-centered approach and patient-doctor approach in order to maintain the patients' health via early diagnosis and avoiding unnecessary biopsies/surgeries while providing a smooth user experience through mobile app solutions.

[0005] Thus, it is desired to address the above-mentioned disadvantages or other shortcomings or at least provide a useful alternative.

OBJECTIVE OF INVENTION

[0006] The principal object of the embodiments herein is to prevent infertility, early and accurate detection of abnormalities in the female reproductive system is necessary prior to therapy.

[0007] Another object of the embodiments herein is to identify the cyst accurately and also saving considerable time in examining the patients and hence reducing the delay in diagnosing the risk of PCOS.

[0008] Another object of the embodiments herein is to maintain the patients' health via early diagnosis and avoiding unnecessary biopsies/surgeries while providing a smooth user experience through mobile app solutions.

[0009] Still, another object of the embodiments herein is simple and cost effective.

SUMMARY OF INVENTION

[0010].The following presents a simplified summary in order to provide a basic understanding of some aspects of the disclosed invention. This summary is not an extensive overview, and it is not intended to identify key/critical elements or to delineate

the scope thereof. Its sole purpose is to present some concepts in a simplified form as a prelude to the more detailed description that is presented later.

[0011] Accordingly, there is provided to a method for detection of polycystic ovary syndrome (PCOS) using android app. In the proposed invention, different tests are required for confirmation of PCOS, such as digital rectal exam (DRE), magnetic resonance imaging (MRI) or Computer Tomography Scan (CT Scan), etc., which can be harmful for patients and also takes longtime of diagnosis for doctors, thereby identifying the cyst accurately and also saving considerable time in examining the patients and hence reducing the delay in diagnosing the risk of PCOS.

[0012] In accordance with an embodiment of the present subject matter relates to a method for detection of polycystic ovary syndrome (PCOS) using android app., comprising the steps of: collecting ultrasound data from patients; Further, the proposed method may involve training polycystic ovary syndrome (PCOS) images using Artificial Intelligence (AI) techniques, and creating a layouts in a mobile development app. applying the conditions and uploading AI trained images in the mobile development app. Furthermore, the proposed method may involve building APK file in a computer, and installing the mobile development app. through the APK File. While entering the data in the mobile development app., the testosterone value is greater than or equal to 160 ng/dl and then the result is positive, otherwise it is negative. Similarly, the progesterone value is less than or equal to 0.7 ng/dl and then the result is positive, else negative.

[0013] These and other aspects of the embodiments herein will be better appreciated and understood when considered in conjunction with the following description and the accompanying drawings. It should be understood, however, that the following descriptions, while indicating preferred embodiments and numerous specific details thereof, are given by way of illustration and not of limitation. Many changes and modifications may be made within the scope of the embodiments herein without departing from the scope thereof, and the embodiments herein include all such modifications.

BRIEF DESCRIPTION OF FIGURES

[0014] These and other features, aspects and advantages of the present invention will be better understood if the following detailed description is read with reference to the accompanying drawings, in which like characters represent like parts in the drawings, where:

[0015] Figure 1 illustrates schematic diagram of PCOS APP in a smartphone, according to the present invention.

[0016] Figure 2 illustrates schematic diagram of PCOS affected women results, according to the present invention.

[0017] Figure 3 illustrates schematic diagram of PCOS non-affected women results, according to the present invention.

[0018] It will be understood by those skilled in the art that the elements in the drawings are shown for convenience and have not necessarily been drawn to scale. For example, the flowcharts illustrate the process using key steps to enhance understanding of aspects of the present invention. In addition, one or more components of the device may be represented in the drawings by conventional symbols, and the drawings may show only the specific details relevant to an understanding of embodiments of the present invention, so as not to clutter the drawings with details that are readily apparent to those skilled in the art who are familiar with the present description.

DETAILED DESCRIPTION OF INVENTION

[0019] The embodiments herein and the various features and advantageous details thereof are explained more fully with reference to the non-limiting embodiments that are illustrated in the accompanying drawings and detailed in the following description. Descriptions of well-known components and processing techniques are omitted so as to not unnecessarily obscure the embodiments herein. Also, the various embodiments described herein are not necessarily mutually exclusive, as some embodiments can be combined with one or more other embodiments to form new embodiments. The term "or" as used herein, refers to a non-exclusive or, unless otherwise indicated. The examples used herein are intended merely to facilitate an understanding of ways in

which the embodiments herein can be practiced and to further enable those skilled in the art to practice the embodiments herein. Accordingly, the examples should not be construed as limiting the scope of the embodiments herein.

[0020] The accompanying drawings are used to help easily understand various technical features and it should be understood that the embodiments presented herein are not limited by the accompanying drawings. As such, the present disclosure should be construed to extend to any alterations, equivalents and substitutes in addition to those which are particularly set out in the accompanying drawings. Although the terms first, second, etc. may be used herein to describe various elements, these elements should not be limited by these terms. These terms are generally only used to distinguish one element from another.

[0021] Accordingly, embodiments here are provided to a method for detection of polycystic ovary syndrome (PCOS) using android app. In the proposed invention, different tests are required for confirmation of PCOS, such as digital rectal exam (DRE), magnetic resonance imaging (MRI) or Computer Tomography Scan (CT Scan), etc., which can be harmful for patients and also takes longtime of diagnosis for doctors, thereby identifying the cyst accurately and also saving considerable time in examining the patients and hence reducing the delay in diagnosing the risk of PCOS.

[0022] Referring Figure 1 illustrates schematic diagram of PCOS APP in a smartphone. The proposed invention is to develop a hand-held smartphone application that can interpret blood sample data's, such as testosterone, progesterone, and results from artificial intelligence (AI) interpretation of ultrasound images of the ovaries to diagnose polycystic ovarian syndrome. It is incredibly beneficial for PCOS testing in terms of cost reduction and early diagnosis, and which may also be included into telemedicine aspects. An AI algorithm DARKNET-19 CLASSIFIER is used to detect PCOS from the ultrasound scan images and Java programming has been built in APP development in order to compare the Testosterone and Progesterone parameters of blood samples of PCOS affected women for finding PCOS status accurately in an early detection

diagnosis. The values which have to be entered in the app for processing are derived from series of case studies from medical journals and doctor's feedback.

[0023] Referring Figures 2 and 3 illustrate schematic diagram of PCOS affected and non-affected women results. The causes of Polycystic Ovary Syndrome (PCOS) or

5 Anovulatory Androgen Excess (AAE) continue to be mysterious, though it appears to be related to both genetic and environmental factors. Different PCOS experts are similar some specialize in blood sugars and insulin, seeing PCOS primarily as a risk for diabetes and obesity. On the other hand, as someone specializing in hormones and glands, all of the changes that characterize the experiences of PCOS in whole populations of women.

10 The underlying mechanism of PCOS is that a hormone called Gonadotropin Releasing hormone (GnRH) is being released from the brain too rapidly, in quicker than normal pulses. This leads to rapid bursts of another hormone being produced in the pituitary gland (a small hormone producing gland at the base of the brain), called luteinizing hormone (LH). As per the repeated cases where women with PCOS exhibit rapid LH
15 pulses. Too much LH can stimulate higher levels of both androgens (including testosterone) and estrogens to be produced, which interfere with ovulation and the menstrual cycle. It is possible to treat PCOS by directly addressing this rapid GnRH hormonal pulsing.

[0024] Hence, the proposed invention is built the mobile app. which takes count of
20 every aspect and parameters which are necessary for the accurate diagnosis. This app works based on the stable judgment system called the Rotterdam consensus. It states that the presence of two out of the three of the following criteria—OLIGOANOVULATION, HYPERANDROGENISM, and POLYCYSTIC OVARIES — (12 follicles measuring 2–9 mm in diameter and/or an ovarian volume > 10 mL in at least one ovary)—defines
25 polycystic ovarian syndrome (PCOS). Therefore, self-examination study is required for women and act as early detection in a non-invasive manner.

[0025] Accordingly, the official Integrated Development Environment (IDE) for developing Android applications is called Android Studio (mobile development app.). More capabilities offered by the Android Studio increase the ability to produce high-

quality Android apps. The product is used to development an app and some features need to be added, like to create a layout and upload an image, multimedia and etc. The app creation is based on more languages, like Kotlin, JAVA, C++ etc. In this product, the JAVA programming is used and coding is developed according to our application.

- 5 [0026] In an embodiment, the method involves collecting ultrasound data from patients; Further, the proposed method may involve training polycystic ovary syndrome (PCOS) images using Artificial Intelligence (AI) techniques, and creating a layouts in a mobile development app. applying the conditions and uploading AI trained images in the mobile development app. Furthermore, the proposed method may involve building APK
- 10 file in a computer, and installing the mobile development app. through the APK File. While entering the data in the mobile development app., the testosterone value is greater than or equal to 160 ng/dl and then the result is positive, otherwise it is negative. Similarly, the progesterone value is less than or equal to 0.7 ng/dl and then the result is positive, else negative.
- 15 [0027] The below table shows the 20 patient's images and blood samples data which are taken for verification and testing the product.

Patient id no	NAME	Age	Testosterone	Progesterone	Result
1	Preethi.g	31	177	0.7	P
2	Lalitha.t	44	194	0.6	P
3	Aarthi.b	19	135	0.8	N
4	Jespamary.h	27	120	4	N
5	Afreen banu.r	26	170	0.5	P
6	Vasanthakala.t	36	161	0.4	P
7	Saral.s	19	114	3	N
8	Angelina.p	24	186	0.3	P
9	Keerthabharavi.j	22	194	0.2	P
10	Thendral.s	33	172	0.1	P
11	Radhi dhevi. s	37	193	0.7	P
12	Sreevaishini. g	26	139	4	N
13	Parveen banu.j	18	123	5	N
14	Haritha.a	23	171	0.6	P
15	Rakshana.u	23	164	0.5	P
16	Rishitha.k	22	187	0.4	P
17	Isvariya.g	30	110	3	N
18	Jennifer.s	29	194	0.2	P
19	Sujitha.s	20	119	2	N
20	Sridarshini	36	127	5	N

Table 1 Comparison Study of Testing

[0028] The foregoing description of the specific embodiments will so fully reveal the general nature of the embodiments herein that others can, by applying current knowledge, readily modify and/or adapt for various applications such specific embodiments without departing from the generic concept, and, therefore, such
5 adaptations and modifications should and are intended to be comprehended within the meaning and range of equivalents of the disclosed embodiments. It is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation. Therefore, while the embodiments herein have been described in terms of preferred embodiments, those skilled in the art will recognize that the
10 embodiments herein can be practiced with modification within the spirit and scope of the embodiments as described herein.

ABSTRACT

“METHOD FOR DETECTION OF POLYCYSTIC OVARY SYNDROME (PCOS) USING ANDROID APP”

Accordingly, embodiments herein disclose a method for detection of polycystic ovary syndrome (PCOS) using android app., comprising the steps of: collecting ultrasound data from patients; Further, the proposed method may involve training polycystic ovary syndrome (PCOS) images using Artificial Intelligence (AI) techniques, and creating a layouts in a mobile development app. applying the conditions and uploading AI trained images in the mobile development app. Furthermore, the proposed method may involve building APK file in a computer, and installing the mobile development app. through the APK File. While entering the data in the mobile development app., the testosterone value is greater than or equal to 160 ng/dl and then the result is positive, otherwise it is negative. Similarly, the progesterone value is less than or equal to 0.7 ng/dl and then the result is positive, else negative.

Figure to be published with Abstract: Figure 1

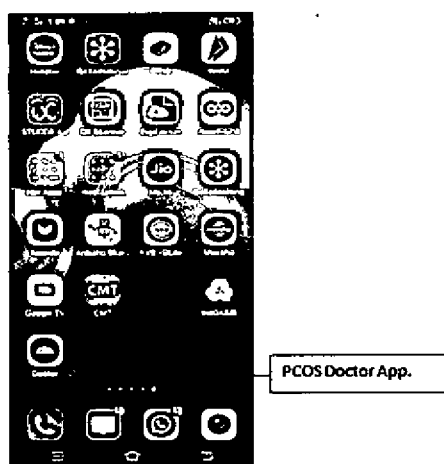


FIGURE 1

CLAIMS

We claim:

1. A method for detection of polycystic ovary syndrome (PCOS) using android app., comprising the steps of:
 - collecting ultrasound data from patients;
 - training polycystic ovary syndrome (PCOS) images using Artificial Intelligence (AI) techniques;
 - creating a layouts in a mobile development app.;
 - applying the conditions and uploading AI trained images in the mobile development app.;
 - building APK file in a computer;
 - installing the mobile development app. through the APK File; and
 - typing the values of progesterone and testosterone and then submitting in the mobile development app.
2. The method as claimed in the claim 1, wherein while entering the data in the mobile development app., the testosterone value is greater than or equal to 160 ng/dl, then the result is positive, otherwise it is negative.
3. The method as claimed in the claim 1, wherein the progesterone value is less than or equal to 0.7 ng/dl, then the result is positive, else negative.
4. The method as claimed in the claim 1, wherein the mobile development app. creation is based on more languages, like Kotlin, JAVA, C++ etc.



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