

COFFEE TABLE BOOK ON



PATENT PORTFOLIO V-2

Strategic patents protecting core innovations,
enabling growth, licensing, and competitive
advantage.



SRI RAMAKRISHNA
ENGINEERING COLLEGE



MANAGING TRUSTEE'S MESSAGE



Dr.SUNDAR RAMAKRISHNAN

The Management takes great pride in the remarkable achievements of our faculty members, researchers, and innovators in obtaining granted patents. These accomplishments reflect the institution's strong foundation in academic excellence, research integrity, and innovation-driven growth.

Innovation and intellectual property creation are essential pillars for national progress and global competitiveness. The granted patents represent the successful translation of ideas into impactful technologies, addressing societal and industrial needs.

We sincerely appreciate the dedication, perseverance, and collaborative efforts of the inventors who have contributed to these achievements. We also commend the continuous support provided by the Research and Development Cell and the Intellectual Property Rights Cell in nurturing a vibrant research ecosystem.

The Trust remains committed to providing the necessary infrastructure, encouragement, and support to promote quality research and innovation. We are confident that these achievements will motivate students and researchers to strive for excellence and contribute meaningfully to the advancement of knowledge.

We extend our best wishes to all contributors and look forward to many more such milestones in the future.

PRINCIPAL'S MESSAGE

Dr. A SOUNDARRAJAN

I am pleased to acknowledge the outstanding achievement of our faculty members, researchers, and innovators in securing granted patents. These accomplishments reflect our institution's strong commitment to research excellence, innovation, and the creation of valuable intellectual property.

Patents are a true measure of originality, technical competence, and problem-solving ability. The granted patents highlighted here demonstrate the dedication of our academic community to transforming innovative ideas into practical solutions that benefit industry and society.

I sincerely congratulate all the inventors for their hard work, perseverance, and scholarly contributions. I also appreciate the continuous support of the Research and Development Cell and the Intellectual Property Rights Cell in encouraging innovation and guiding researchers through the patenting process.

I am confident that these achievements will inspire students and young researchers to pursue creative research and contribute meaningfully to technological advancement.

I wish all the contributors continued success and look forward to many more achievements in the years ahead.





ASSOCIATE DEAN R&D'S MESSAGE

Dr.C BHAGYANATHAN

The R&D Cell of Sri Ramakrishna Engineering College plays a pivotal role in fostering a strong culture of research, innovation, and technological advancement. It actively supports faculty members, researchers, and students in identifying research problems, developing innovative solutions, and translating research outcomes into societal and industrial value. In an era where knowledge-driven innovation defines technological leadership, the R&D Cell serves as a catalyst for interdisciplinary research, funded projects, and industry collaboration. The Patent Cell functions under the R&D Cell by enabling intellectual property protection, facilitating patent filing, and strengthening the institution's research commercialization and innovation ecosystem.

SREC IP CELL ORGANIZERS



Head IP Cell
Dr. M. S. GEETHA DEVASENA



IP Cell Member
Mr. V. KRISHNA KUMAR



Assistant Professor (Sr. Grade)
Mrs. M. SHANTHINI

Content Creation Flow



01

PATENT IN PRODUCT

“Indian patents protect innovation while balancing public interest, encouraging inventors, startups, and research to transform ideas into national growth sustainably.”

02

PATENT IN PROCESS

“Process patents reward efficiency, sustainability, and smarter ways of manufacturing.”

03

PATENT IN DESIGN

““Design patents protect appearance, where innovation meets visual identity.”

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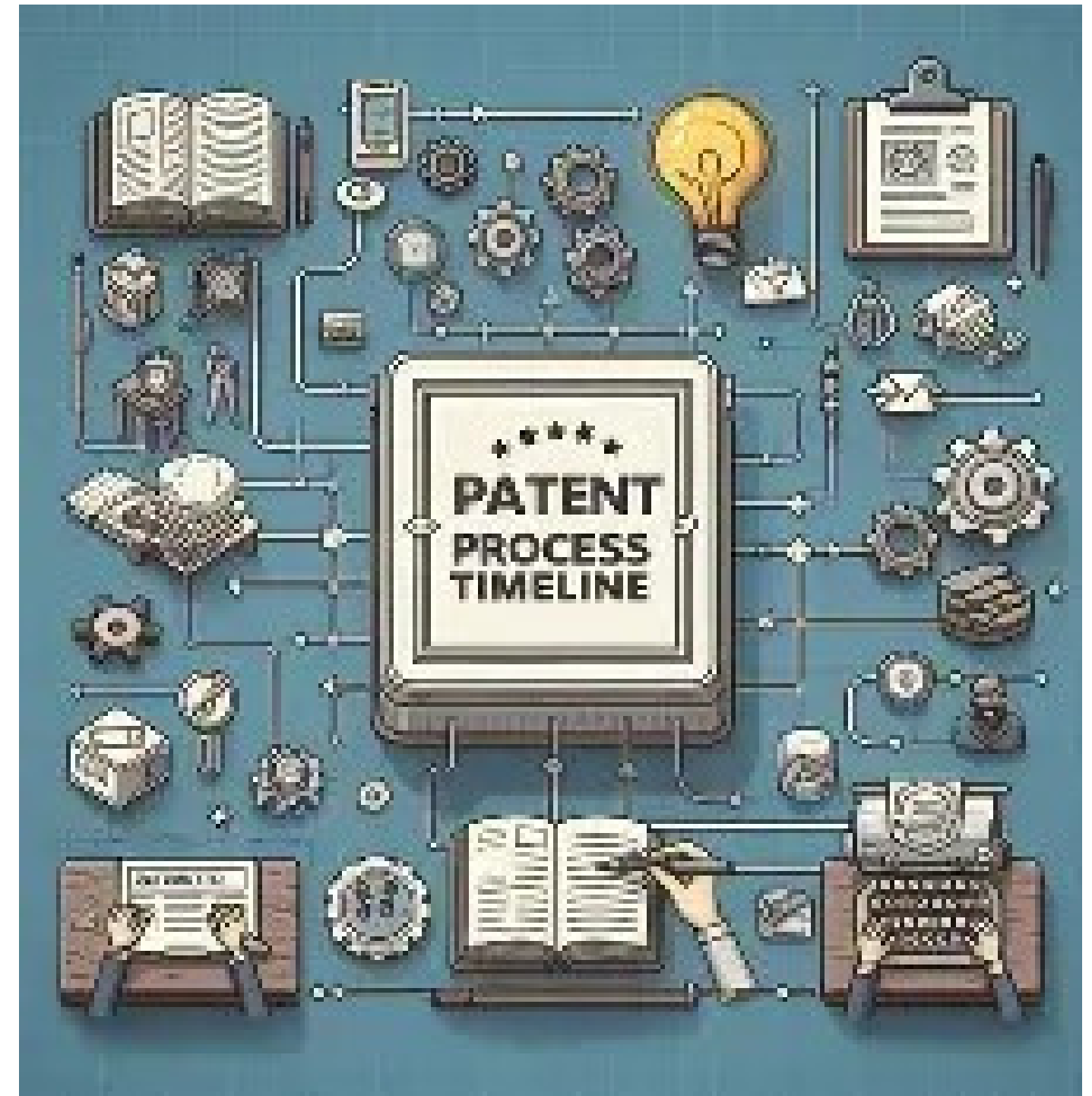
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PATENT IN PRODUCT

“Product patents secure competitive advantage by protecting novel design, material, and functionality.”

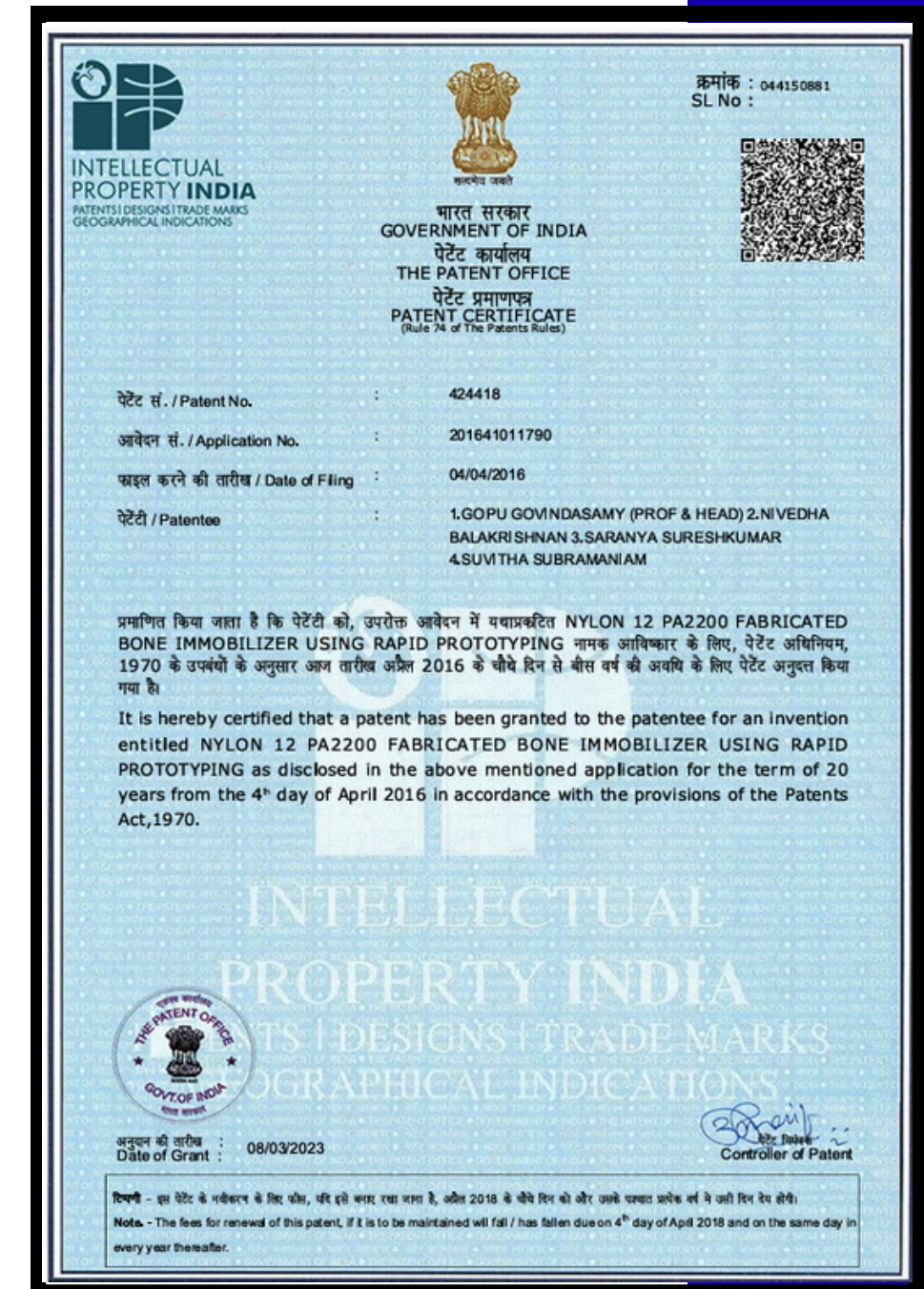
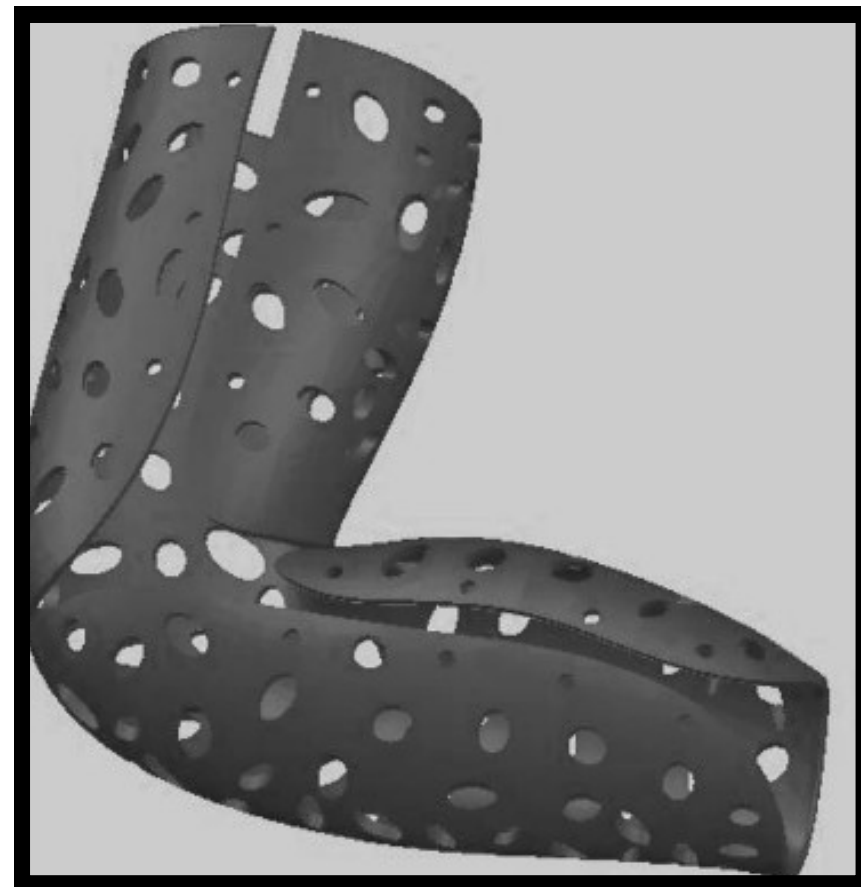


Nylon 12 PA2200 Fabrication Bone Immobilizer using Rapid Prototyping

Granted, Patent Number:424418
Dr.G Gopu Professor / ECE

ABSTRACT

The present invention discloses a bone immobilizer includes a plurality of holes (103) for 5 ventilation supports skin respiration of fracture skin of patient; a plurality of strip holes (102) comprising lace in the plurality of holes (103) on either side in order to make adjustments regarding compression, tightness or grip of immobilizer to fit patient 39 and a plurality of linear strips adapted to balance weight of the bone without much strain; and a plurality of loops kept on either side parallel to each other to hold strips which are also made up of a polymer material.



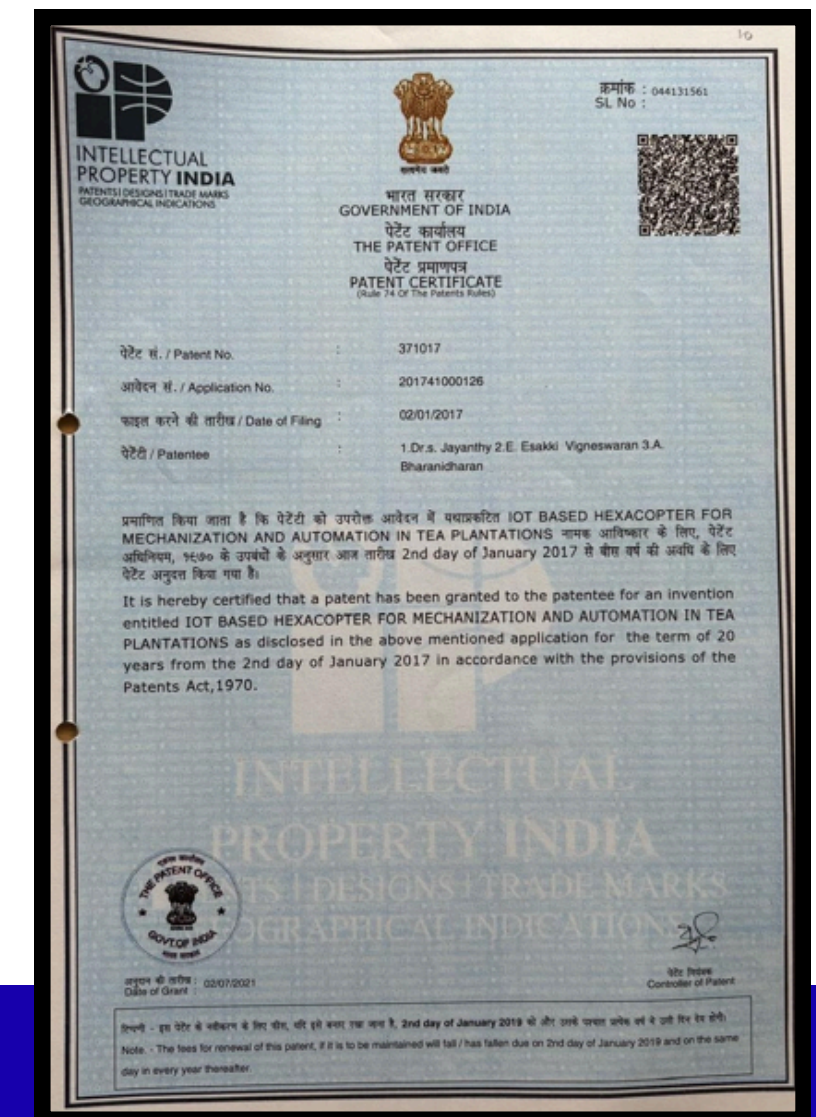
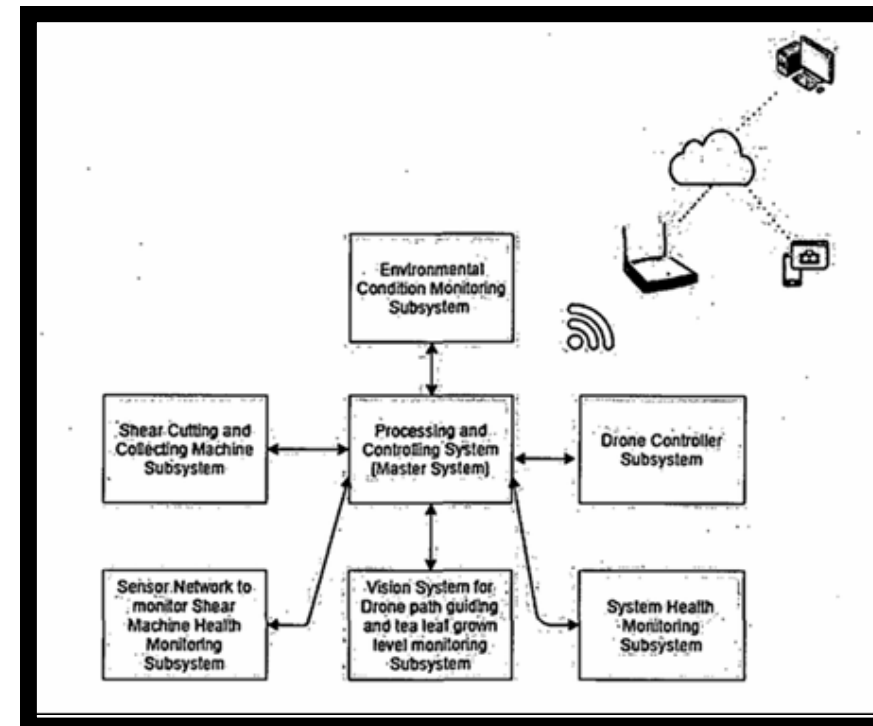
IOT Based Hexacopter for Mechanization and Automation In Tea Plantations

Granted, Patent Number: 371017

Dr.S Jayanthi Professor / ECE

ABSTRACT

The design of a hexacopter for automation of tea leaf harvesting and remote environmental monitoring in tea plantations is comprising of shear cutting machine fixed for harvesting tea leaves, embedded sensor network for monitoring environmental conditions and updating the information to a self learning cloud infrastructure, consists of flying unit with 6 rotors, power unit consists of Micro-Power electric generator to drive the drone and charge the battery



Automatic Incubator with Separate Setter and Hatcher for Poultry Farming

ABSTRACT

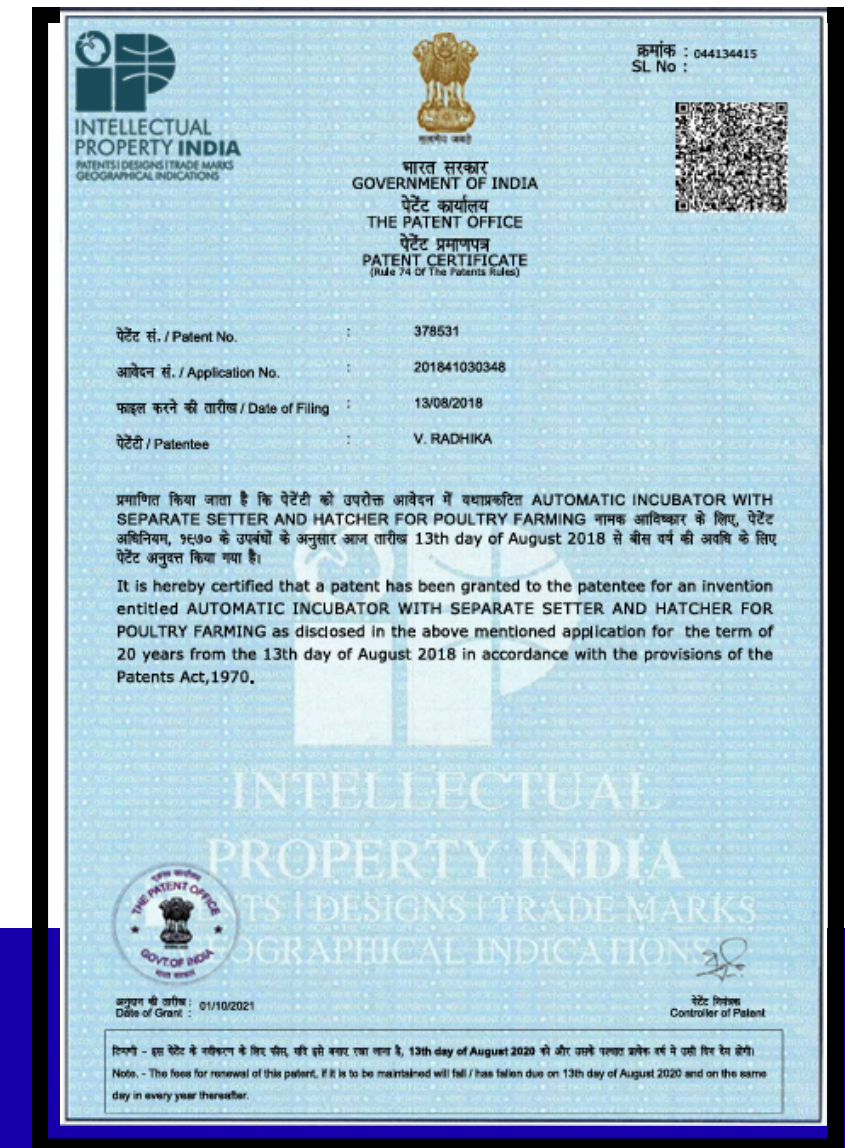
An automatic incubator with separate setter and hatcher for poultry farming is disclosed. Said incubator comprises a separate setter and hatcher; a temperature sensor that is disposed in both the setter and the hatcher; a temperature control block that facilitates the maintaining of temperature ; a humidity control of block that facilitates maintaining the humidity , a motor control block facilitates the tilting of a pan placed inside the setter at an angle; a controller that facilitates the monitoring and controlling of the operations of the incubator; a battery backup that facilitates the supplying of power to the incubator during power failure, with the incubator being configured to work at 5V power supply; a relay that facilitates the switching between direct power supply and battery power supply; and an automatic voltage regulator and a real-time clock, which facilitate the charging of the battery backup.

Granted, Patent Number: 378531

Dr.V Radhika Associate Professor/ BME

Dr.V Rukkumani Associate Professor / EIE

Dr.D Devasena Associate Professor/ EIE



Automatic Fall Detection Of The Elder People Using Motion Sensing

Granted 397869

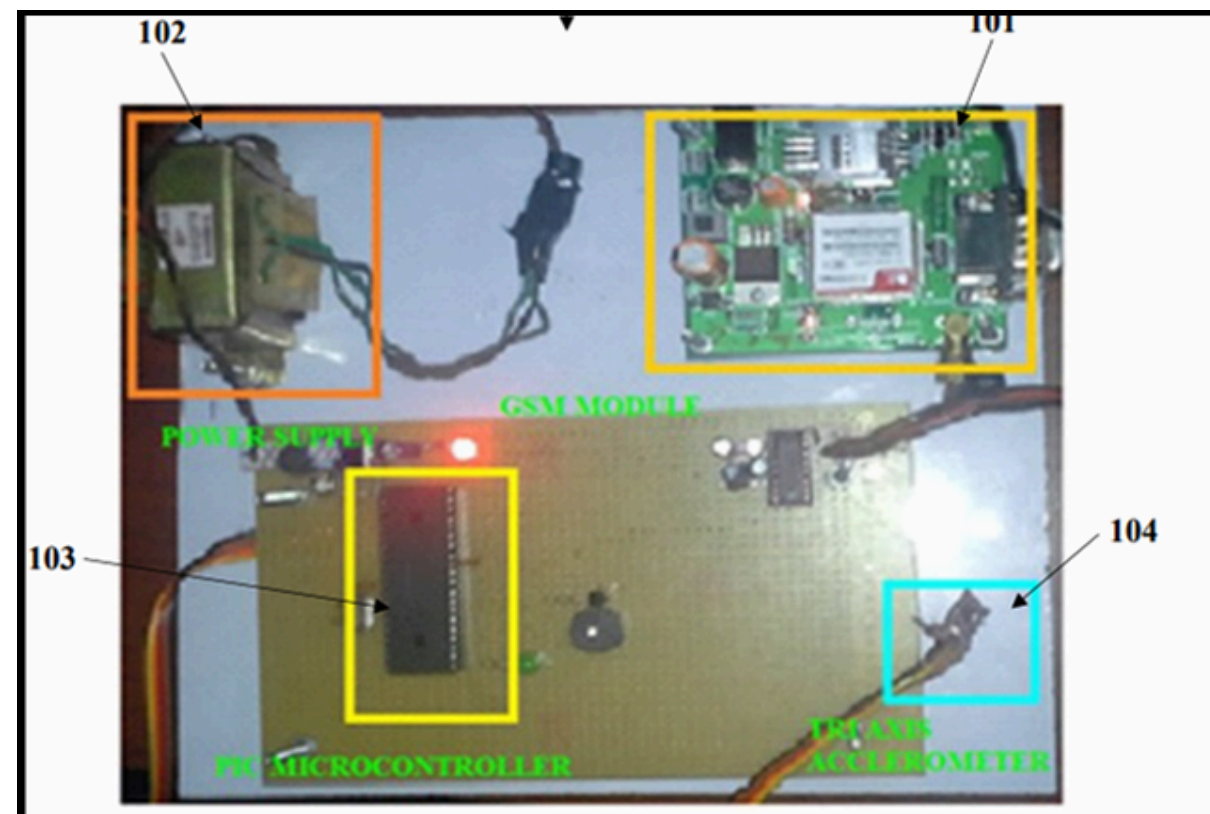
Dr.B Sharmila Professor/ EIE

Dr.V Rukkumani Associate Professor / EIE

Dr.Y Dharshan Assistant Professor(Sl.Grade) / EIE

ABSTRACT

A system for automatic fall detection (100) for elderly people using motion sensing that is embedded in a belt and wearable on hip is disclosed. Said system (100) comprises an accelerometer-based detector (104); a microcontroller (103); an alerting system (101), and a power supply unit (102). The system (100) reliably detects the fall events without disturbing the users with excessive false alarms, presenting also the advantage of not changing the user's routines. Also it enhances the safety of the target groups and allows the elderly to carry out a more normal lifestyle.



Semi Automatic Cow Dung Cleaning Machine

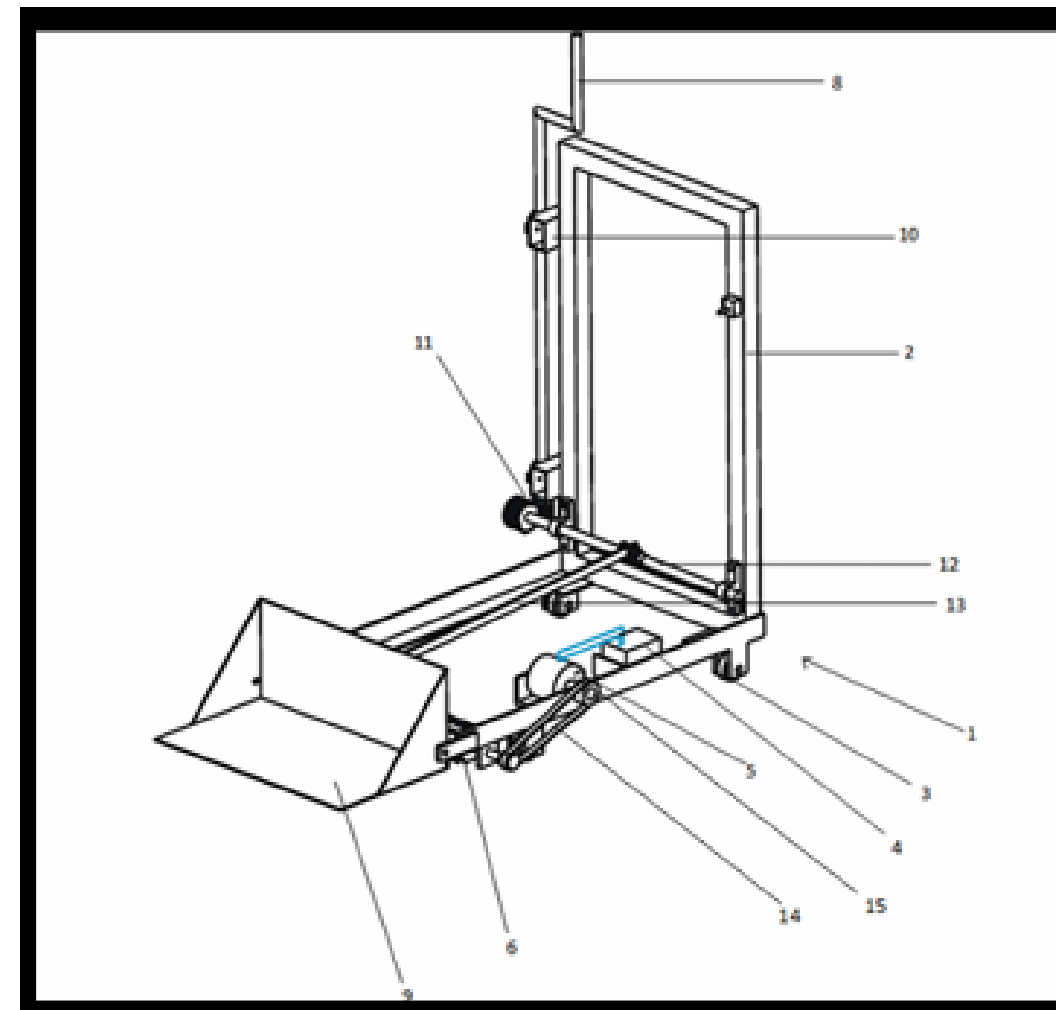
Granted 386374

Dr. A Brailson Mansingh

Assistant Professor(Sl.Grade)/ MECH

ABSTRACT

The present invention relate to a device for cleaning cow dung wherein the device (1) is characterized in having a frame (2) attached with wheels (3); a rechargeable battery (4); a gear motor (5); a rotating brush (6); a handle (8); a fork (9); a transmission system (7) to transmit the motion from to the handle (8) to fork (9); wherein, the handle (8) is capable of being rotated by hand in clockwise direction to convert the rotary motion into linear motion in the fork link rod (13) with worm gear arrangement (11) along with the worm gear shaft (12) and as a result the fork link rod (13) will move the fork (9) up and down and make the fork (9) touch the ground. The fork (9) and the brush (6) are used in coordinate to clean the cow dung.



Automated Cradle Gaurd

Granted, Patent Number: 569303
Dr.G Gopu Professor / ECE
Dr.M S Geetha Devasena Professor /CSE

ABSTRACT

An automated cradle guard device comprises a control panel including a fingerprint sensor, a display board, and a keypad connected to an electric lock configured to provide authenticated access to the cradle. A battery is provided to supply power when electrical connectivity to the cradle is interrupted. A pneumatic holder is attached to the cradle hatch and is configured to support the hatch as a stand for safely removing the baby from the cradle. A camera fixed on the hatch is configured to capture images of the person accessing the control panel and handling the baby. A microphone is configured to recognize instances when the baby screams or cries . A lamp and a protective mesh are provided within the cradle to maintain warmth,safegaurd the baby from foreign objects.

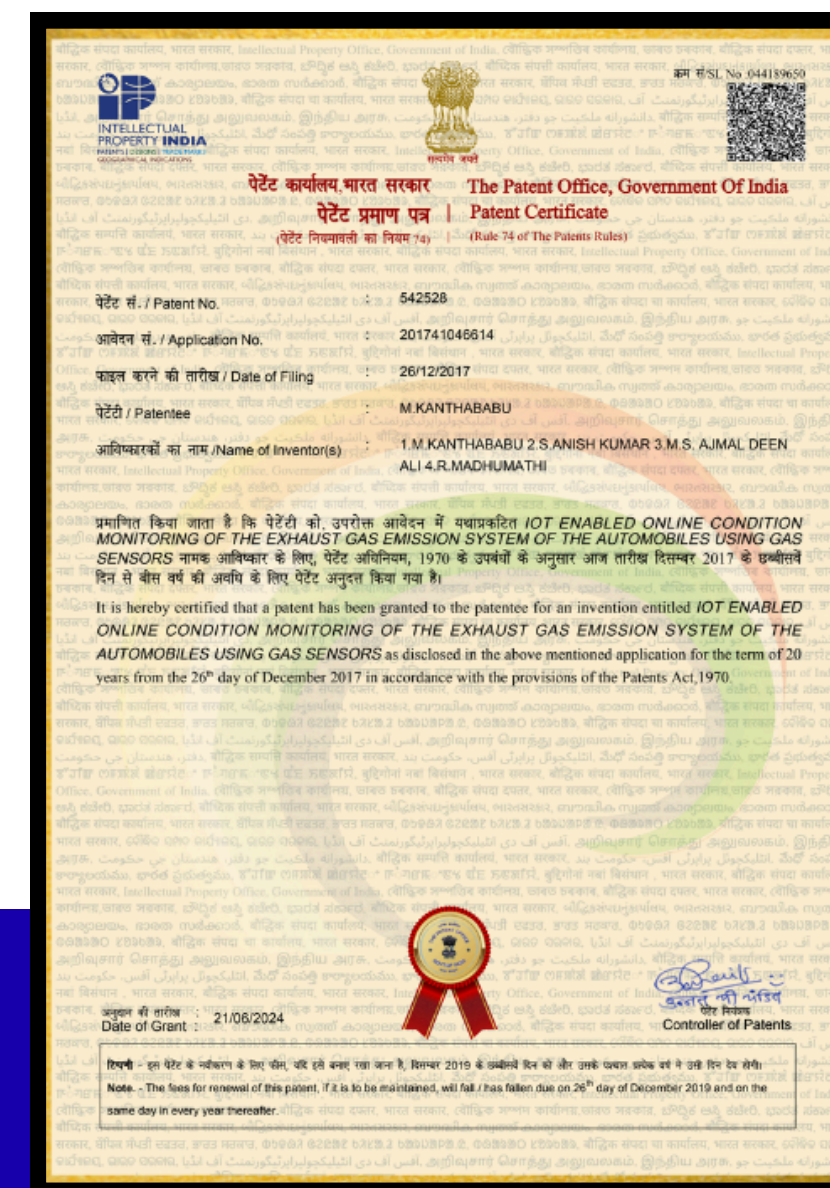
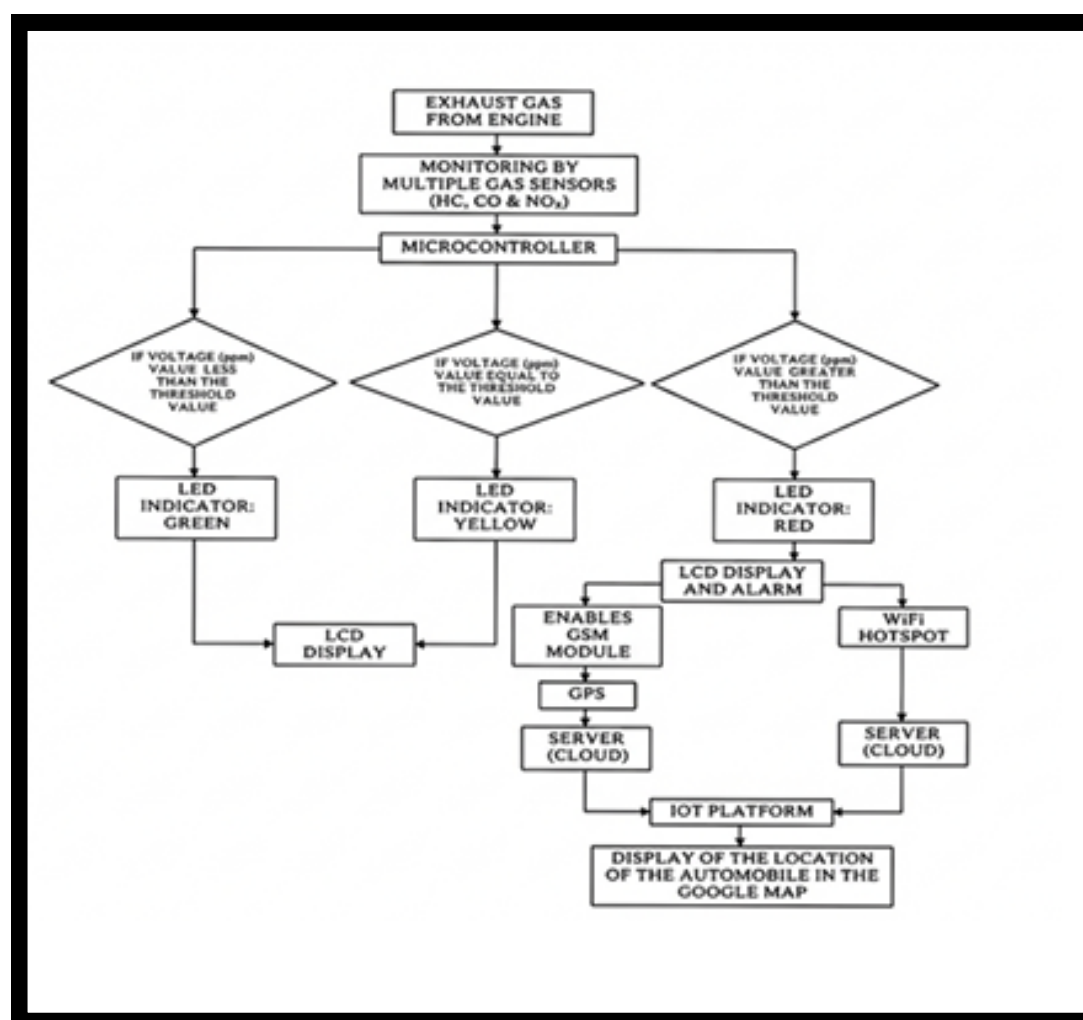


IoT Enabled Online Condition Monitoring Of The Exhaust Gas Emission System Of Automobiles Using Gas Sensors

ABSTRACT

The present invention provides a system to track polluted automobiles on the road using Google Maps by means of gas sensors. The IoT-enabled monitoring of exhaust emission gases of an automobile displays the status of engine condition by parts-per-million values on an LCD screen to the user and by different light indications. The signals acquired from the gas sensors, which are fitted in the exhaust of the automobile, are processed by a microcontroller that calculates the percentage of carbon monoxide, hydrocarbon, and nitrous oxide emission gases in the form of voltage values. When the exhaust gas values exceed a threshold limit, a red light glows along with an alarm, which enables the GSM module and in turn activates the GPS of the automobile to indicate the location of the vehicle on Google Maps.

Granted, Patent Number: 542528
Dr. R Madhumathi Associate Professor / CSE



Smart Glass For Visually Impaired People

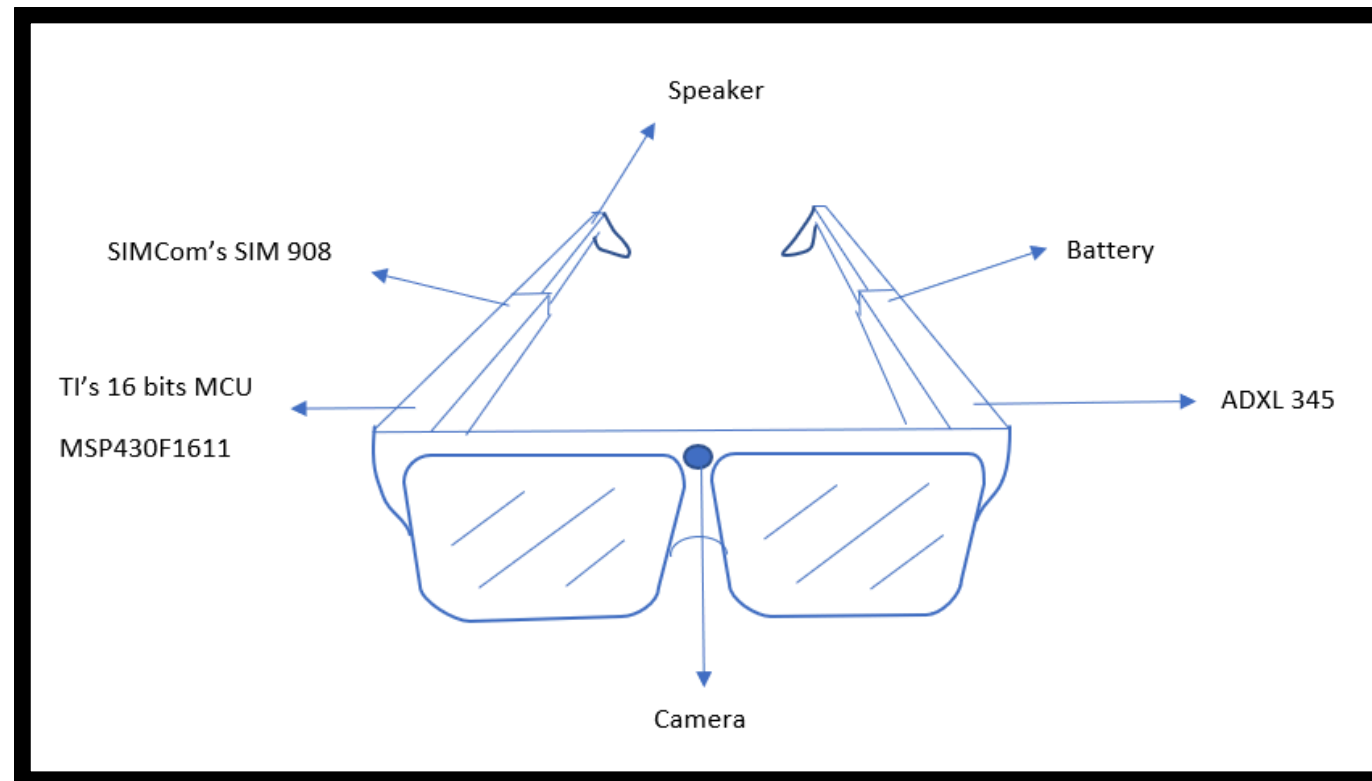
Granted, Patent Number:510953

Dr.M Kalaiarasu Professor / IT

Mrs. S Jansirani Assistant Professor(Sl.Grade) / IT

ABSTRACT

Smart glass for visually impaired people characterized in that object tracking sensor and fall detection sensor. The said object tracking sensor contains moving camera 1 and the fall detection sensor comprises triaxial accelerometer sensor 4. The present invention contains object detection algorithm to detect objects around the person using head motion detection. The said fall detection methodology alerts the friendship people of the user to protect them and provide safety. The present invention is a simple and compatible device for easy access of visually impaired person.

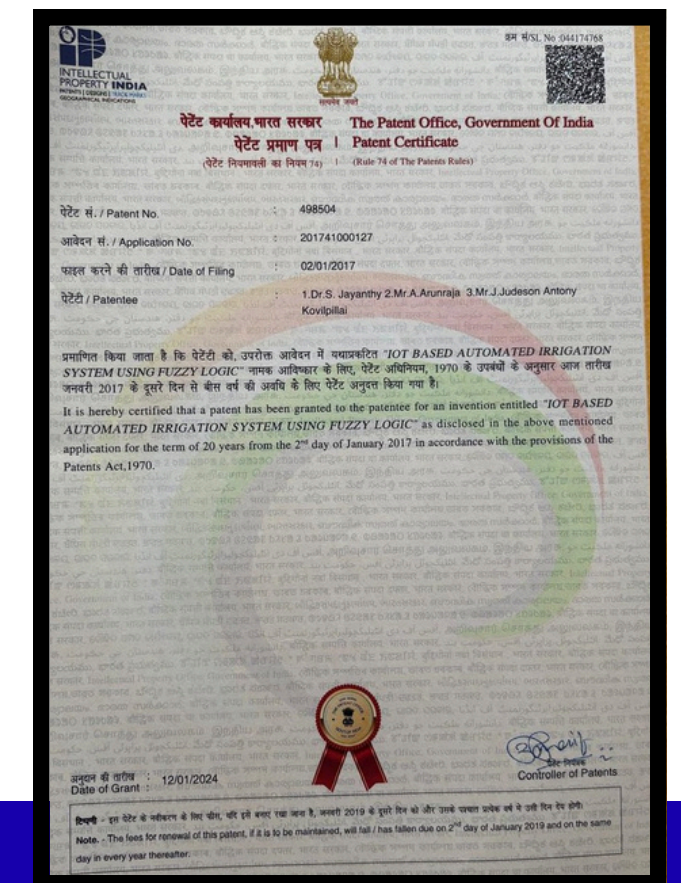
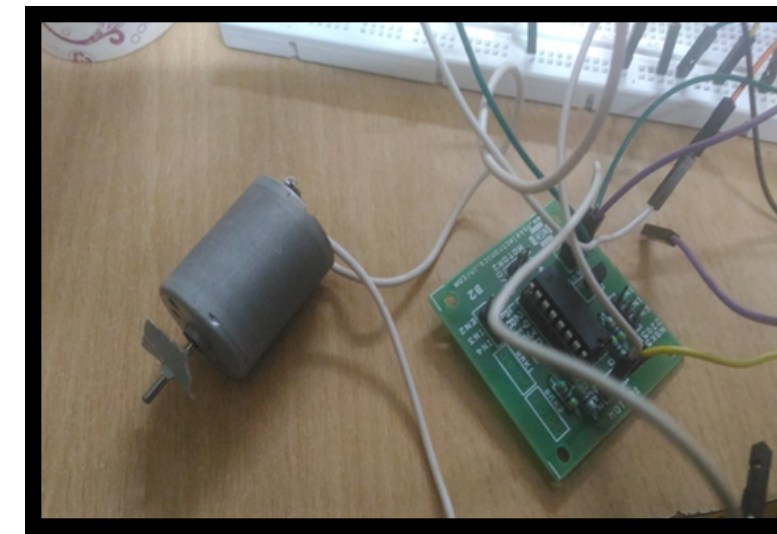


IoT Based Automated Irrigation System Using Fuzzy Logic

Granted, Patent Number:498504
Dr.S Jayanthi Professor / ECE

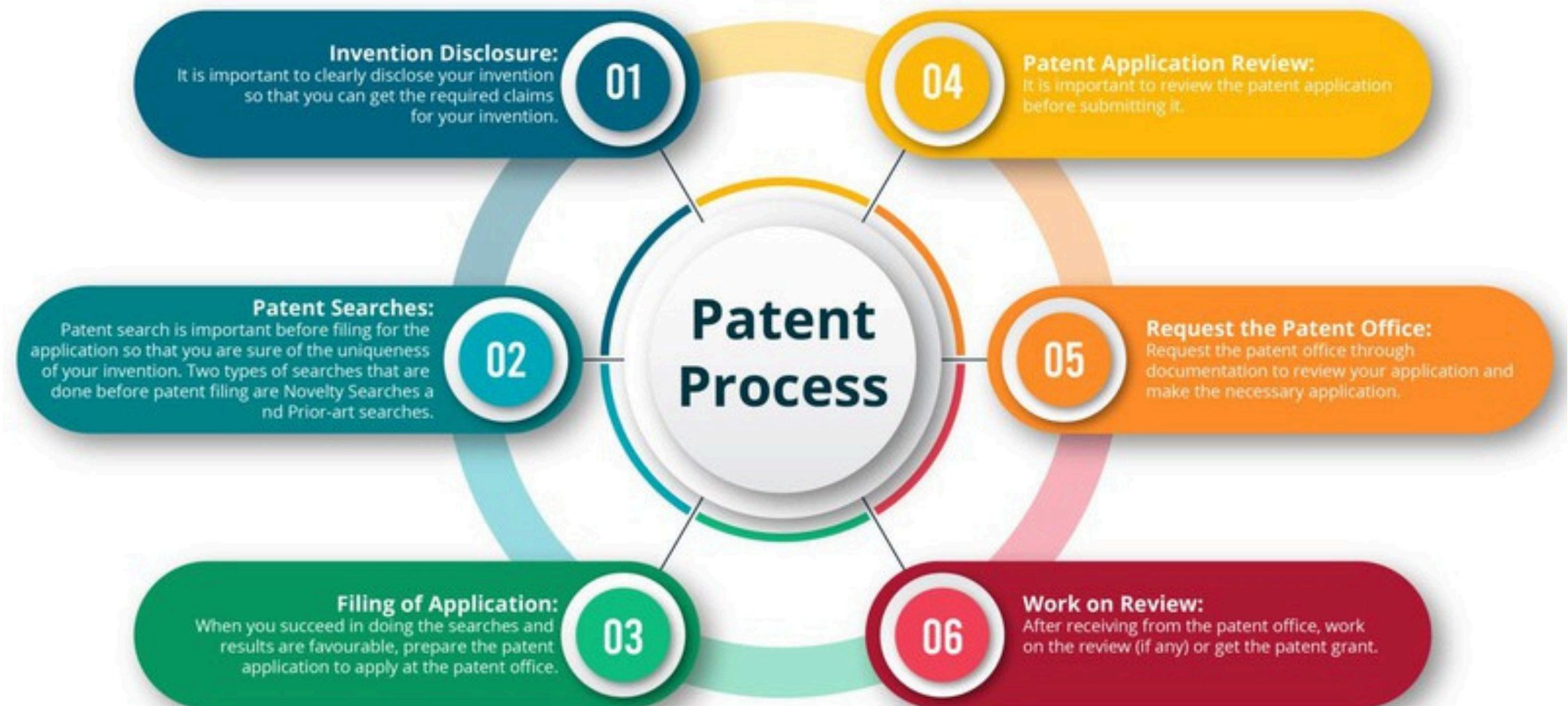
ABSTRACT

This invention incorporates the design of a smart irrigation system which can give an analysis of the various factors affecting the crop . growth and production using different set of fuzzy rules for prediction. This invention is designed using Ti CC3200 microcontroller (Onboard WiFi) and sensors to measure the temperature, Humidity and moisture values and send the status of the agricultural field to the user mobile. The system uses defined fuzzy rules-based predictor to automatically control the motor used for irrigating the fields. The system is powered by solar battery. The outputs are sent to a Dweet.io and the data& 39;s are retrieved at Freeboard.io an online dashboard on which the output is displayed. This invention also provides an additional option for the user to switch ON/OFF the water supply remotely in case of any unprecedented events.



PATENT IN PROCESS

“Patenting a process ensures that ingenuity in method and optimization is rightfully recognized.”



Apparatus for Generating Clean Energy with Real Time Monitoring & Controlling Mechanism

Granted Patent Number.346674

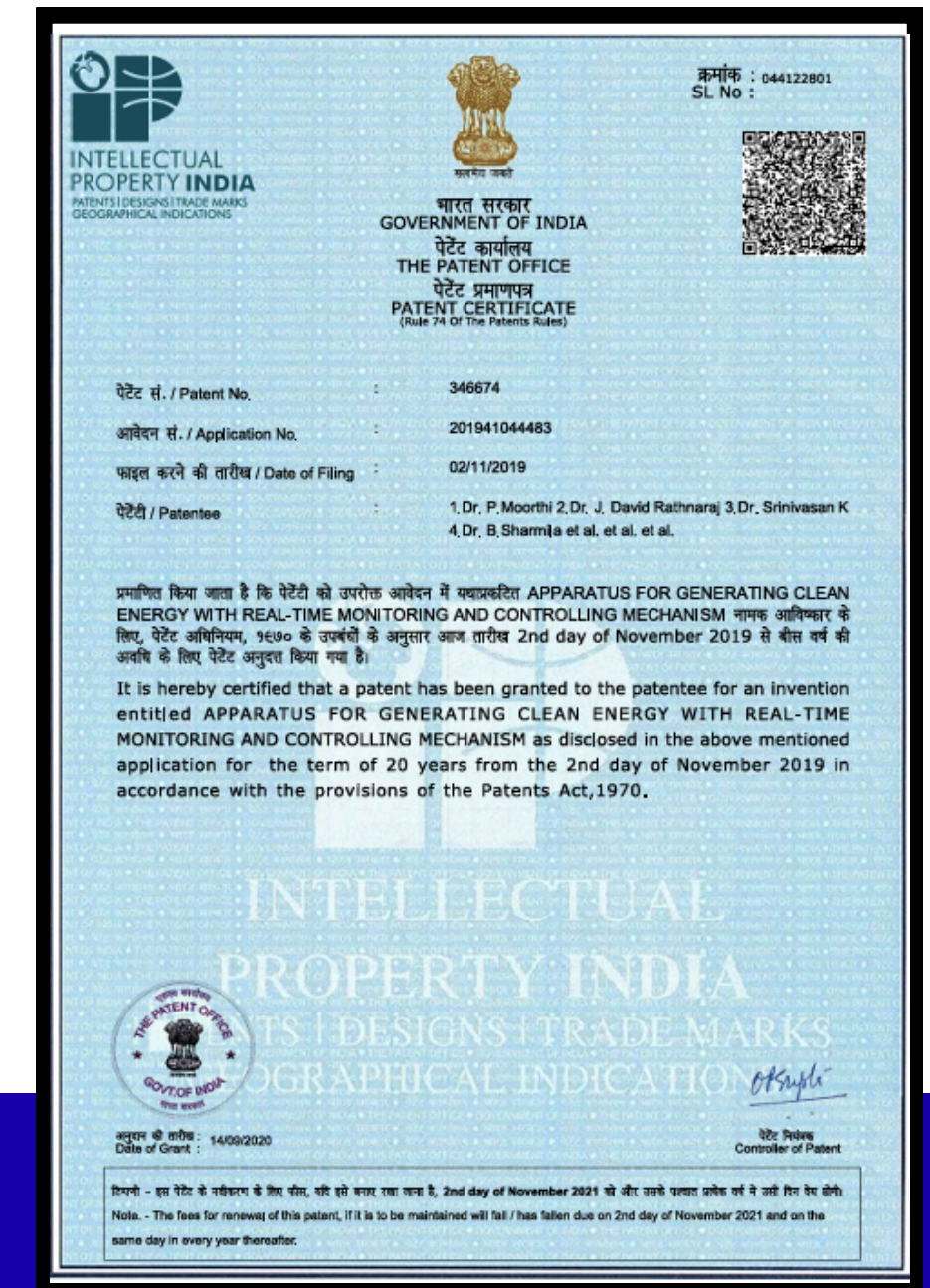
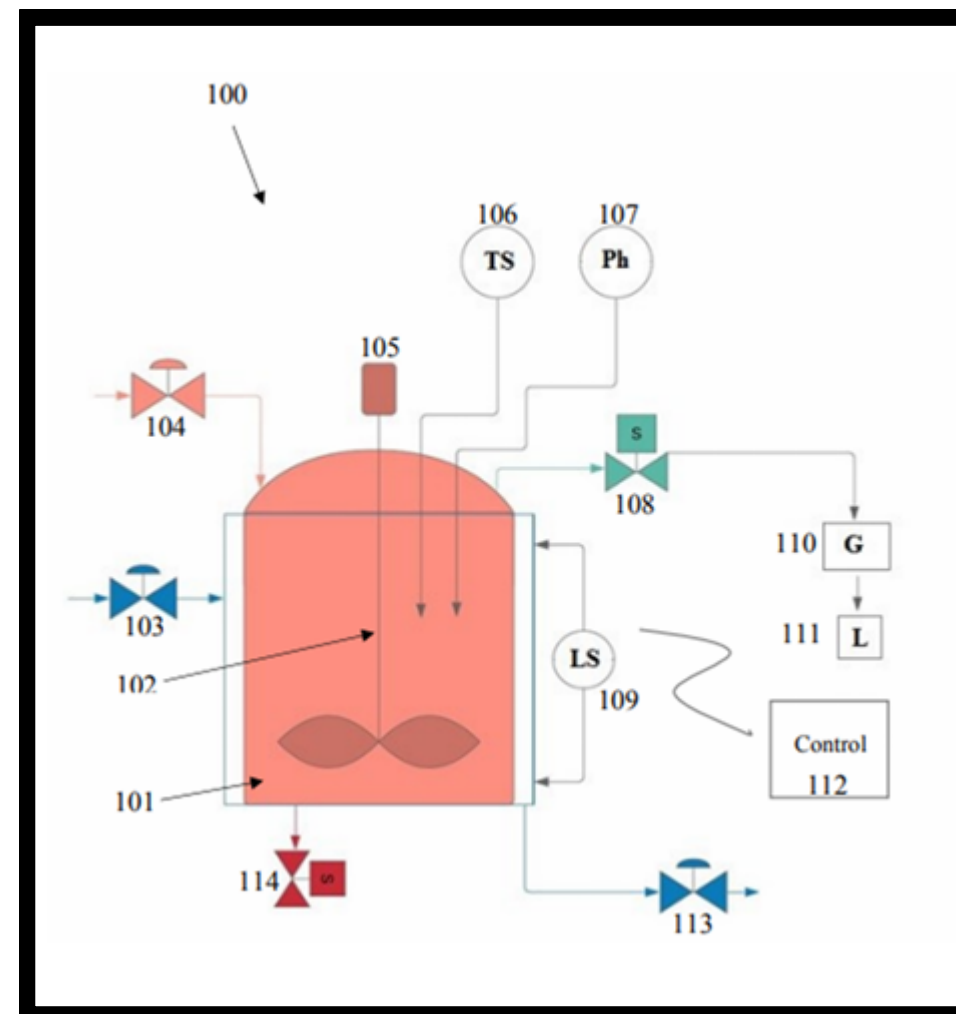
Dr.B Sharmila Professor / EIE

Dr.K N Thirukkuralkani Head of Incubation

Dr.D Devasena Associate Professor / EIE

ABSTRACT

An apparatus for generating clean energy with real-time monitoring and controlling mechanism is disclosed. In an embodiment of the present disclosure, the apparatus comprises a digester with stirrer mechanism and a real-time monitoring and controlling mechanism. The apparatus comprises a digester that comprises: a tank to store bio-waste to be digested and a drum that is configured to be floating in the bio-waste slurry, said drum moving up and down based on the gas generated and stored in it.



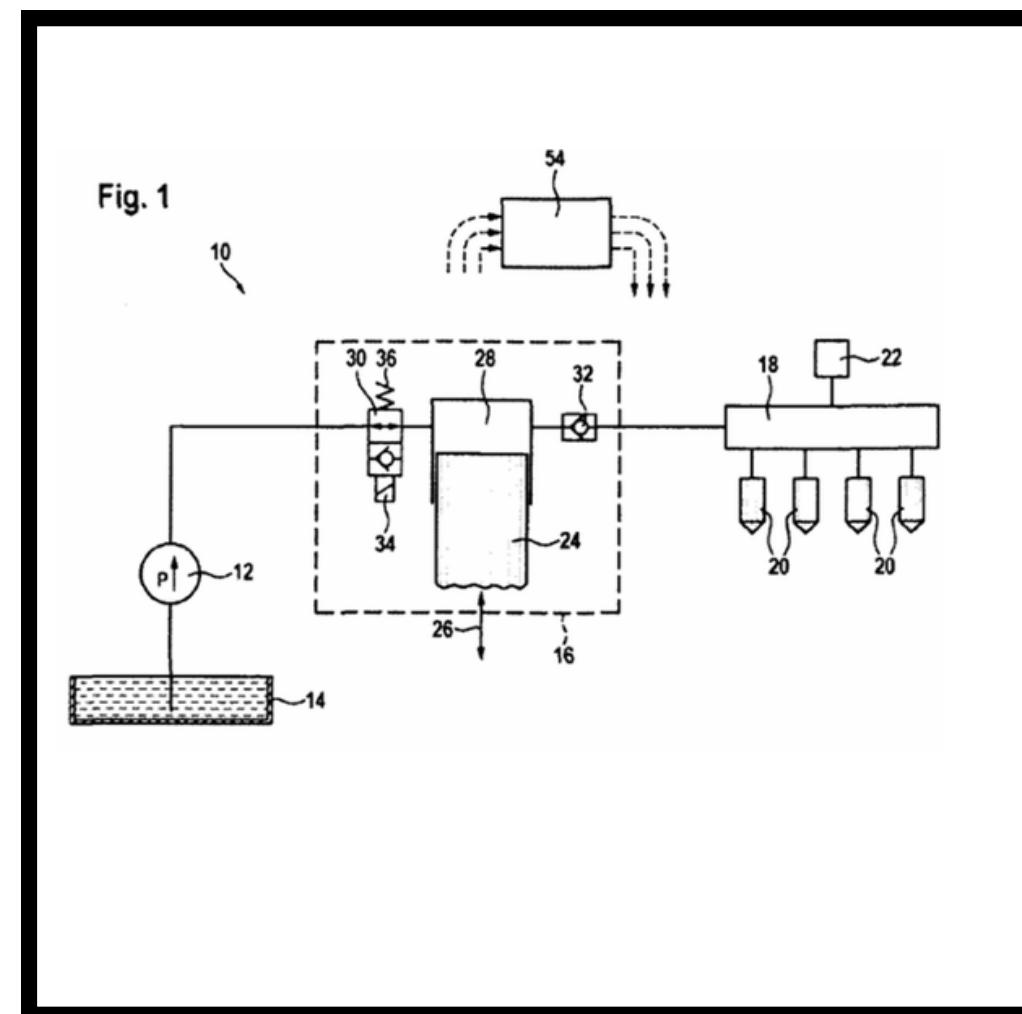
Abrasive Slurry Agitator for External Surface Finishing Process

ABSTRACT

A method for operating a fuel injection system (10) of an internal combustion engine wherein an electromagnetic actuating device (34) controls fuel supply is defined. A control signal fed to the electromagnetic actuating device (34) is defined by at least two parameters. In an adaptation method, where a second parameter is established, at least one first parameter of the control signal is gradually changed from a starting value to such an end value that a closing or opening of an amount control valve (30) is at least indirectly no longer or only just detected. Thereafter, first parameter is at least provisionally established based on the end value. The provisionally established first parameter is adapted based on at least one current operating variable of the fuel injection system (10) or the second parameter is adapted based on the at least one current operating variable and the provisionally established first parameter.

Granted, Patent Number: 337145

Dr. P Karuppuswamy Prof and Head/ MECH



Development of Al-MG/MGAL204 in-Situ Composites Synthesized Through H3BO3 Addition and Investigation

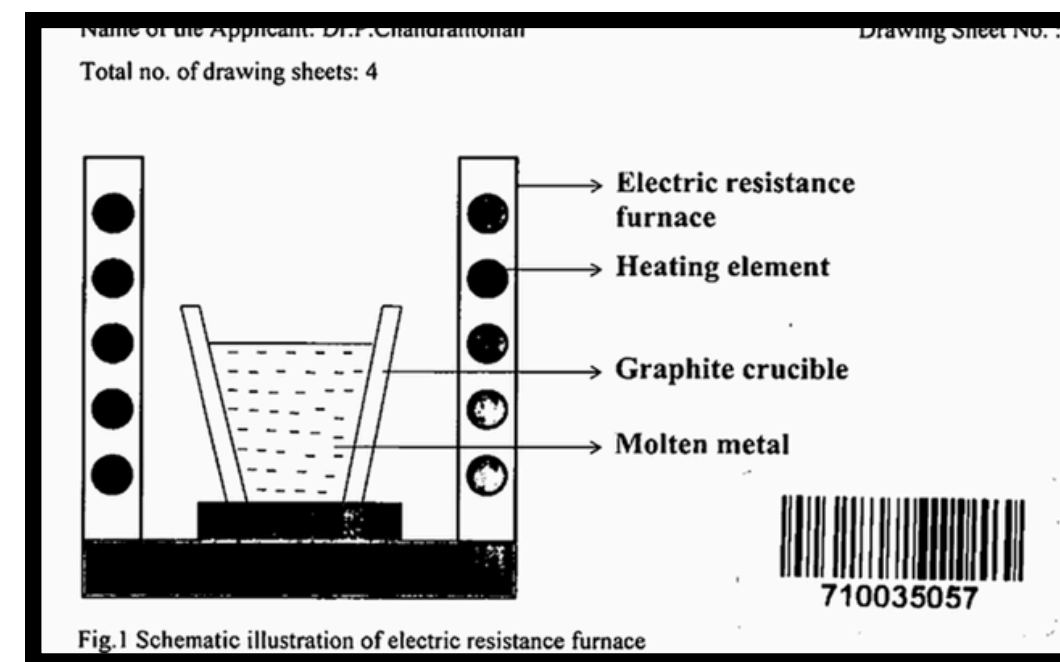
ABSTRACT

This invention relates to the novel approach carried out for synthesizing of in-situ Magnesium Aluminate (MgAl₂O₄) particles in the Al-4Mg alloy by Boric Acid (H₃BO₃) precursor addition (1 wt %, 1.5 wt % and 2 wt %) during the casting process. Al-4Mg alloy was prepared using the pure aluminium and commercial grade pure magnesium in an electric resistance furnace. H₃BO₃ precursor with varying wt.% (1, 1.5 and 2) and average size of 20 µm was taken as the oxide source and added into the Al-4Mg melt. The fabricated Al-4Mg/MgAl₂O₄ in-situ composite specimens (1, 1.5 and 2 wt %) were taken for fatigue testing at two different stress amplitude of 0.3 % and 0.6% and at the frequency of 0.3 Hz. The developed composite with better fatigue properties can be utilized for marine and naval application.

Granted, Design Patent Number: 519051

Dr. P Chandramohan Prof and Head/ AERO

Dr. R Raghu Assistant Professor / MECH



Eco Friendly Refrigerator with Zero Refrigerant

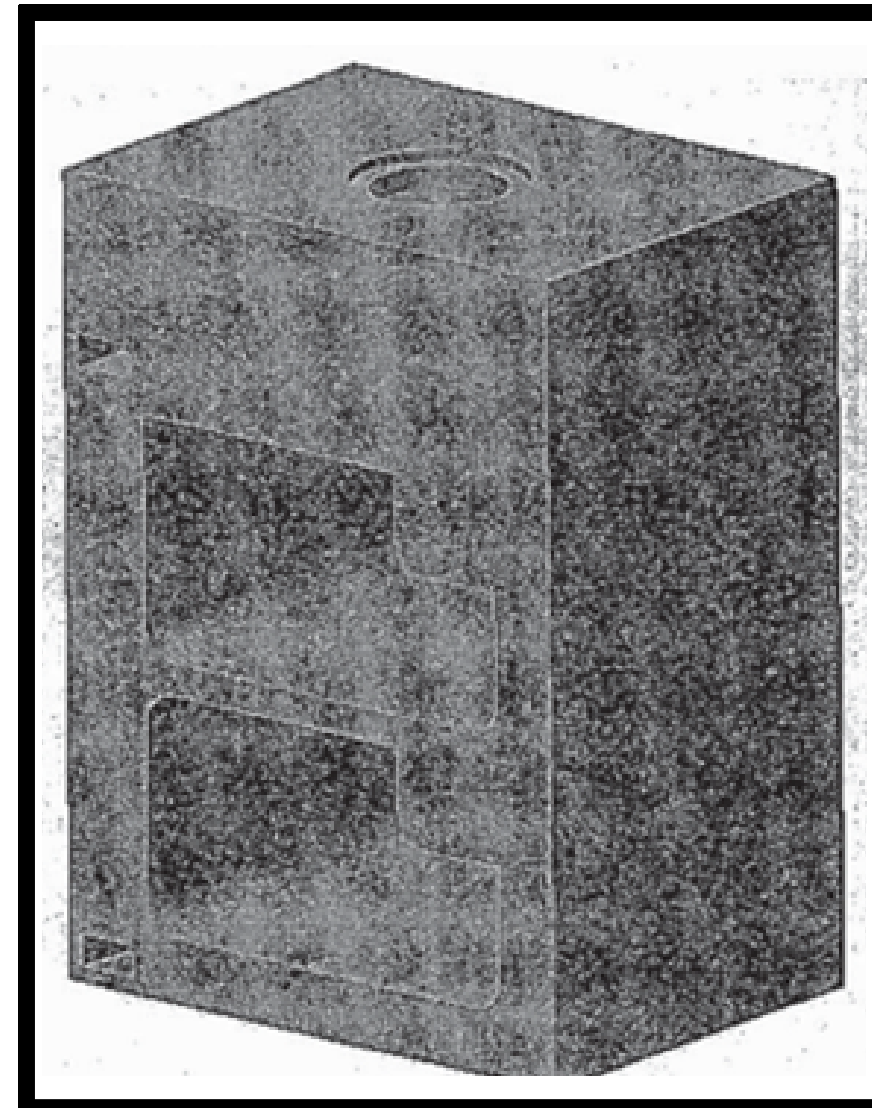
Granted: 384499

Dr.M S Suresh Kumar

Assistant Professor(Sl.Grade) / R&A

ABSTRACT

The present invention provides an eco friendly refrigerator with zero refrigerant that includes an outer cell (102), a peltier module (107) and a suction fan (110). The dry air is produced by means of Peltier module (107). The Peltier module (107) sucks the atmospheric air from the surrounding. Initially the atmospheric air comes in contact with the cold side heat sink (109). The cold side heat sink (109) which is having temperature lower than the dew point temperature of the air condenses the water molecules present in it. The air becomes dehumidified to some extent. After that, the dehumidified air comes in contact with the hot side heat sink (108). The hot side heat sink (108) increases the temperature of the dehumidified air and increases the dryness factor. The resultant air becomes heated and dehumidified. This dry air was passed over the surface of the Zeer pot system which ultimately increases the evaporation rate. This process continues till the power supply is given to the Peltier module (107).



 INTELLECTUAL PROPERTY INDIA WWW.PATENTS.GOV.IN भारत में पेटेंट (भारत में पेटेंट) भारत में पेटेंट (भारत में पेटेंट)	 भारत सरकार GOVERNMENT OF INDIA	पेटेंट कार्यालय / THE PATENT OFFICE पेटेंट कार्यालय भवन / P.O. BUILDING जी.एस.टी. रोड, गिरीडीह, गुवाहाटी पिनकोड: 781005 दूरभाष: 0361-2502000 फैक्स: 0361-2502000 ईमेल: patent@ipindia.gov.in वेबसाइट: http://ipindia.gov.in
पेटेंट नं. / No. 201641013857		
पेटेंट दिनांक / Dated the 16/12/2021		
पेटेंट के आवेदनकर्ता / To : Address of Service- Ideas2IPR, B-115 Chander Nagar, Janak Puri, New Delhi-110058 Ph: 9891016781 Email: mail@ideas2ipr.com Email Id- mail@ideas2ipr.com , msuresh76@yahoo.com		
विषय :- पेटेंट आवेदन संख्या 201641013857 के संबंध में अधिनियम की धारा 43 के तहत पेटेंट अग्रिम तथा पेटेंट रजिस्ट्रार से प्रेषित की सूचना Sub :- Intimation of the grant and record of patent under section 43 of the Act in respect of patent application no. 201641013857		
माननीय महोदय, Sir/Madam,		
आपको सूचित किया जाता है कि पेटेंट अधिनियम, 1970 की धारा 12 व 13 तथा उस अधिनियम के तहत प्रस्तुत पेटेंट आवेदन के प्रमाण [ब] को हूँ सूचना के तहत पेटेंट अग्रिम किया गया है। तथा पेटेंट अग्रिम की तारीख 16/12/2021 को पेटेंट रजिस्ट्रार से प्राप्त की गई है। This is to inform you that following the examination of above mentioned patent application under section 12 and 13 of The Patents Act, 1970 and Rules made thereunder [and bearing held on] a patent is hereby granted and recorded in the Register of Patents on the 16/12/2021. The Patent Certificate is enclosed herewith.		
पेटेंट संख्या / Patent No	: 384499	
आवेदक का नाम / Name Of Applicant	: 1.M.S.SURESHKUMAR (ASST. PROFESSOR SL GRADE) 2.S.V. THIRUVIKRAMAN 3.K.SARAVANA KUMAR 4.R.B.VENKOTH	
पेटेंट दिनांक / Date of Patent	: 21/04/2016	
प्राथमिकता दिनांक / Priority Date	: 21/04/2016	
पेटेंट हेतु अग्रिम दर्ज करने की तिथि / Filing date of Request for examination	: 21/04/2016	
शीर्षक / Title	: ECO FRIENDLY REFRIGERATOR WITH ZERO REFRIGERANT	
दावे की संख्या / Number of claims	: Amended single claim 1 filed on 23/10/2019.	
प्रस्तुत पेटेंट के अग्रिम का प्रमाण अधिनियम की धारा 43 के तहत पेटेंट कार्यालय के अधिकाधिकार क्षेत्र में किया जाएगा। The grant of above mentioned patent will be published in the Official Journal of the patent Office under section 43 of the Act.		
पेटेंट अधिनियम 1970 का संशोधित पेटेंट (संशोधन) नियम, 2005/ पेटेंट नियम, 2003 का संशोधित पेटेंट (संशोधन) नियम, 2016 की धारा 142 की उप-धारा (4) के प्रावधानों के तहत प्रत्येक प्रतिलिपि की तिथि से 3 माह के भीतर इस कार्यालय में संशोधन शुल्क जमा किया जाना चाहिए। The payment of renewal fee is required to be made at this office within three(3) months from the aforesaid date of recording according to the proviso in sub-section(4) of Section 142 of The Patents Act, 1970, as amended by The Patents (Amendment) Act, 2005 / The Patents Rules, 2003 as amended by The Patents (Amendment) Rules, 2016.		
Pramathesh Sree (पेटेंट रजिस्ट्रार) Controller of Patents		
टिप्पणी / Note : 1. संशोधित नवीकरण शुल्क हेतु कृपया मासिक पेटेंट, अधिकाधिक एवं भारत विदेश की अधिकाधिक वेबसाइट www.ipindia.gov.in पर उपलब्ध पेटेंट (संशोधन) नियम 2016 की प्रत्येक अनुसूची (शुल्क) देखें। For revised renewal fees kindly refer to the First Schedule (fees) of The Patents (Amendment) Rules 2016 available on the official website of Controller General of Patents, Designs and Trade Marks www.ipindia.gov.in 2. कार्यालय द्वारा पेटेंट प्रमाण की प्रतियाँ जारी करने के बाद प्रतियाँ जारी की जाएंगी। No hard copy of Patent Certificate shall be issued separately by the office.		

Method of Synthesis of a Chemical Compound for the Detection of Phosgene

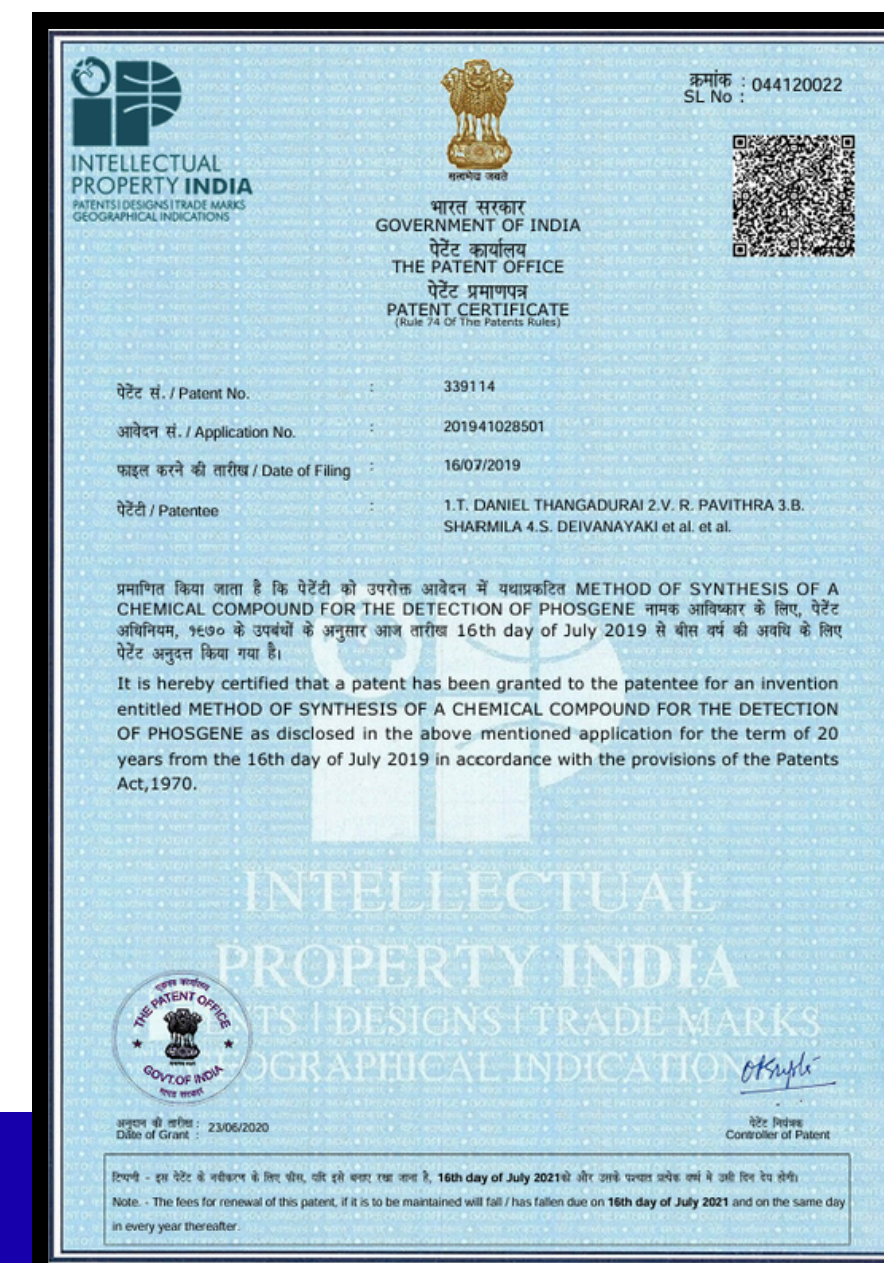
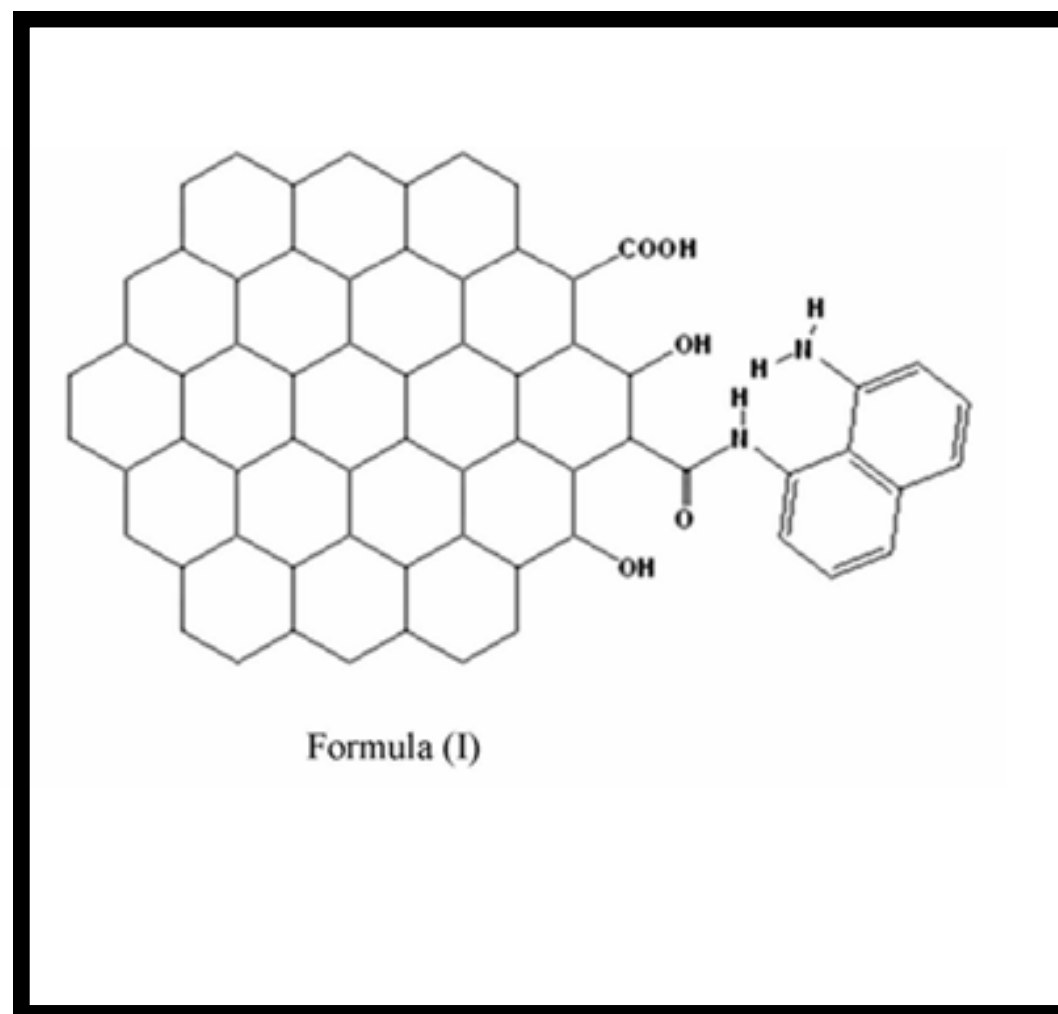
Granted, Patent Number: 339114

Dr.B Sharmila, Professor / EIE

Dr.S Deivanayaki Associate Professor / PHY

ABSTRACT

A novel compound for the detection of phosgene is disclosed. The compound 5 consists of the molecular structure as defined in Formula (I). The method of synthesis of the compound is also disclosed.



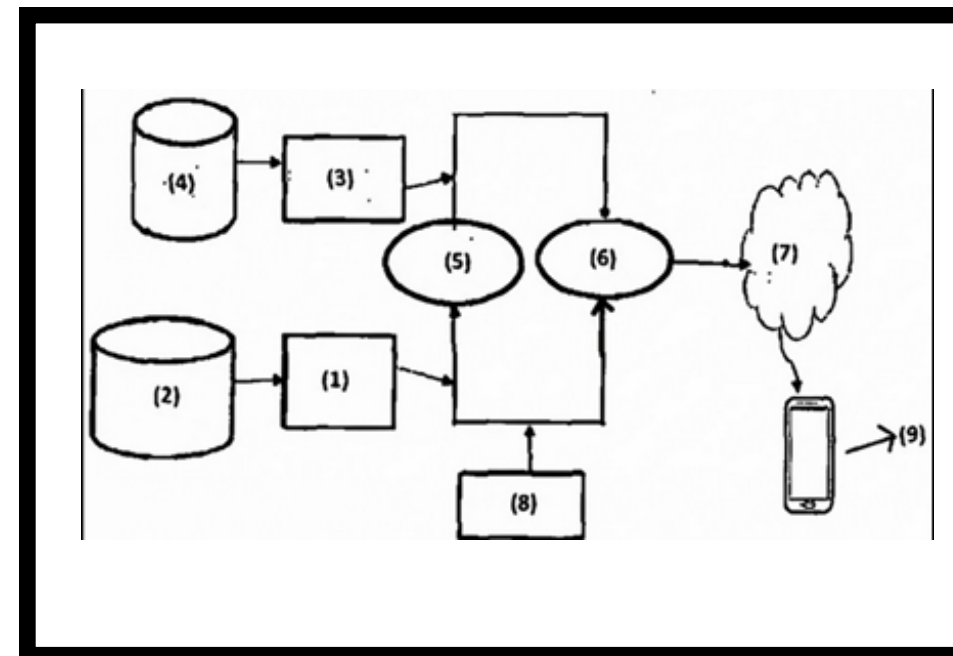
A Method And System For Detecting Soil Nutrients And Moisture Using Iot

ABSTRACT

A system for detecting soil nutrients and moisture using IoT belongs to the field of monitoring soil nutrients, more particularly Nitrogen, Phosphorous, and Potassium, and displaying the precise values of NPK to the farmers using a mobile application and the Internet of Things. A method is used for collecting soil solution and making it by the addition of reagents and subjecting it to the photodiodes of the colour sensor. The system comprises a colour sensor, a moisture sensor, an Arduino acquisition board, a NodeMCU Wi-Fi module, a power supply unit, a cloud database, and a mobile application. The soil nutrient and moisture content obtained from the colour sensor and moisture sensor are converted into digital form in the Arduino acquisition board. The output of the Arduino acquisition board is processed in the NodeMCU Wi-Fi module and is stored in the cloud database. The data stored in the cloud database is accessed using the mobile application, which is capable of actuating irrigation and fertigation systems.

Granted, Patent Number: 542730

Dr.R Madhumathi Associate Professor / CSE

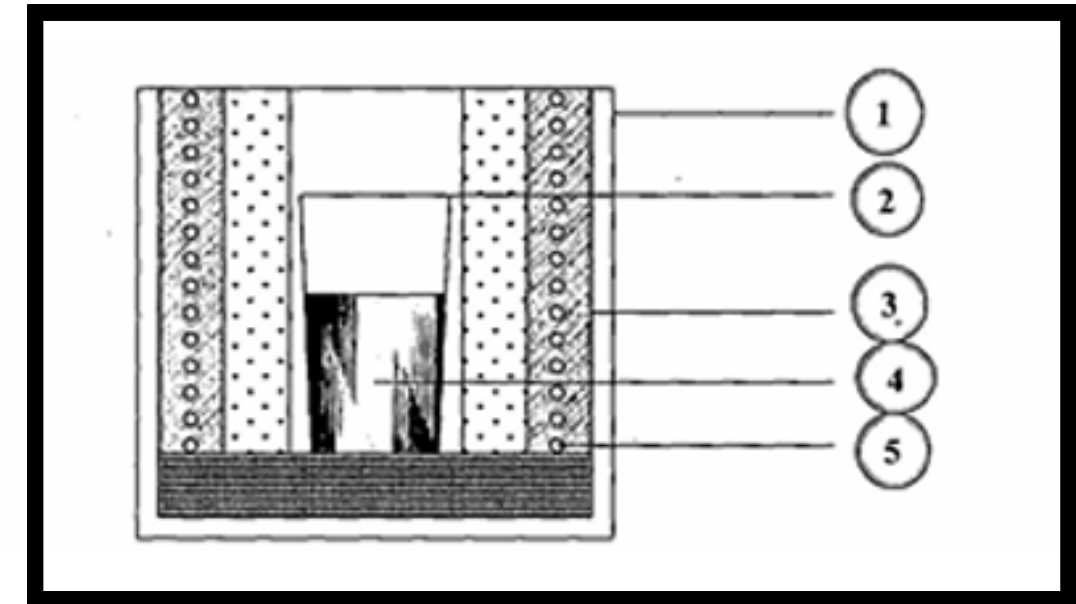


Filtration of Iron by using Micro and Nano Powders of Alloying Elements in Recycled Aluminium Scraps

Granted, Patent Number: 543115
Dr.C Bhagyanathan Professor / MECH
Dr. P Karuppuswamy Professor / MECH

ABSTRACT

In aluminium recycling, iron is considered a major impurity. The presence of iron in aluminium results in poor machinability and also impacts the mechanical properties of the material, leading to the formation of needle-shaped intermetallic structures. Iron present in the aluminium melt cannot be completely removed but can be reduced through the addition and subsequent reactions of various alloying elements. The developed method and process use manganese, strontium, and cobalt powders in micro and nano sizes to reduce iron content in molten recycled aluminium. Experimentation is carried out using assorted sorted aluminium scraps such as automobile components, electrical components, extruded components, and turning and boring aluminium scraps. Manganese powders assist in the sedimentation of intermetallic phases through effective holding time and controlled holding temperature maintained in an aluminium resistance furnace with a regulated cooling rate. This method enables the reduction of iron content in molten recycled aluminium by effectively filtering the sedimented intermetallic phases through the use of preheated ceramic foam filters in a filtering setup.



Utilising Dross-heat Derived from Pyrometallurgy for Efficient Aluminium Extraction from Low-magnesium Scraps

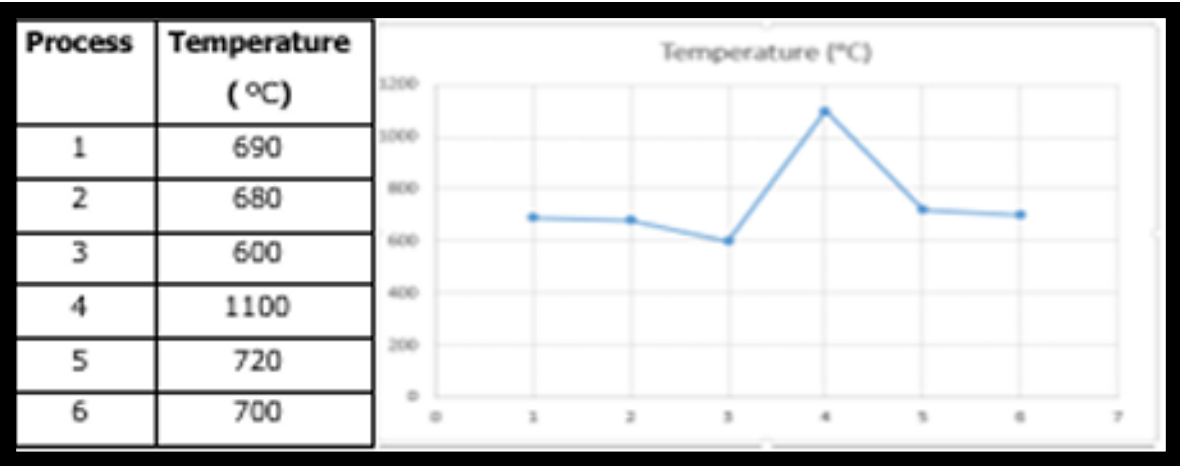
Granted, Patent Number: 551596

Dr. C Bhagyanathan Professor / MECH

Dr Sathiyaseelan G Assistant Professor/Mech

ABSTRACT

This invention proposes a technique for the effective retrieval of aluminum from the excess heat produced during the dross roasting procedure. The technique involves precise regulation of temperature, conversion of residues, and the selective application of halogens to expedite exothermic processes. The method is defined by a careful equilibrium of coke and halogen ratios, manual stirring, and the use of low-magnesium aluminium alloys with particular size requirements, guaranteeing ideal temperature distribution and improved reaction kinetics. The application encompasses the fabrication of aluminium alloys from various low magnesium scraps, including teen, telic, taste, twitch, taint/tabor, talcred, talon, thigh, thrill, and tough aluminum, all of which have dimensions smaller than 50mm. In addition, the technique prioritizes cost efficiency by utilizing waste heat from dross residue as an energy source, offering a sustainable method for extracting aluminum from low magnesium Scraps. To summarize, this novel approach provides a thorough and economical solution for extracting aluminium, by incorporating temperature regulation, chemical enhancement, and resource utilization. This strategy not only improves efficiency in the extraction of aluminium, but also supports sustainability objectives, making it a useful contribution to the fields of metallurgy and recycling. This strategy not only facilitates the efficient retrieval of resources but also coincides with endeavors aimed at environmental preservation.

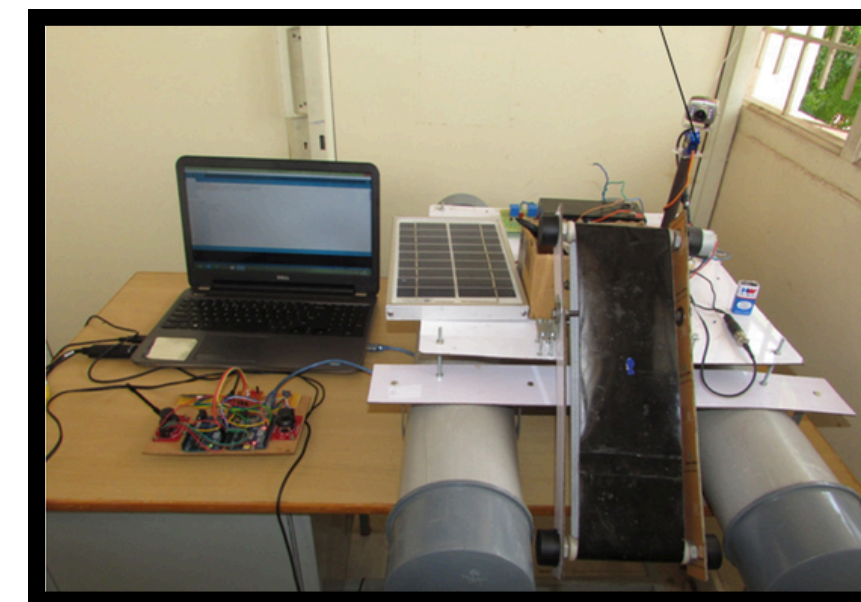
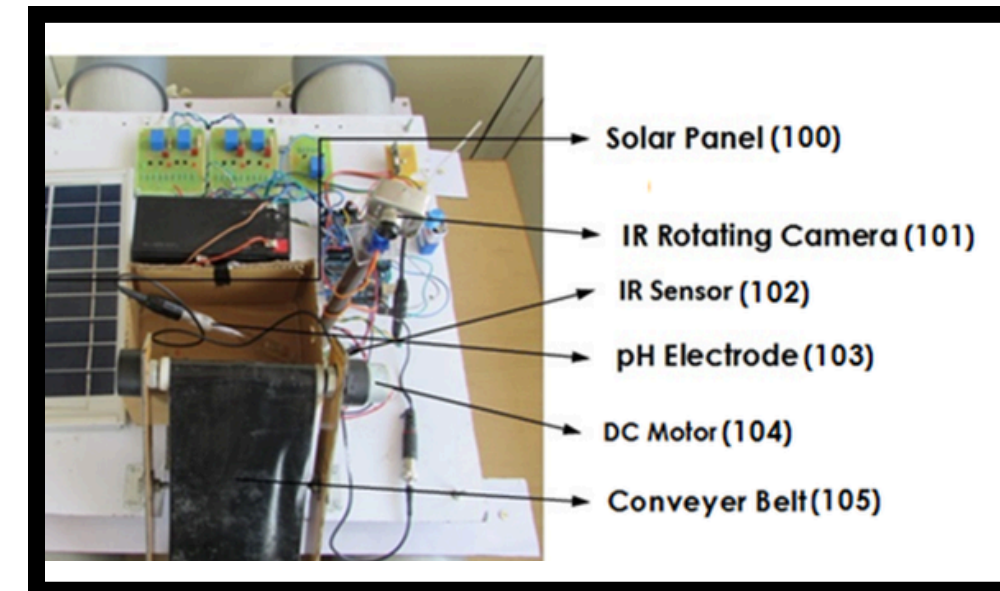


Lake Surface Cleaning Boat

Granted, Patent Number:455156
Dr. S P Vimal Associate Professor / ECE

ABSTRACT

One of the major issues in our country is pollution. Pollution is of several types which include land, water and air. Increase in pollution will leads to spoil of the natural resource and causes harmful diseases in our human body. This invention mainly focused on water pollution. Water is polluting in various means. Some major issues are mixing of chemical wastes with water from various industries. This can be denoted by monitoring the change in pH level of water . Another issue is immersing of plastics and algae in lake water or pond. Plastics pollutes the water and algae occupies the maximum area of lake or pond. The proposed invention estimates the detection of any change in the pH level of water , removing of plastics and algae on the surface of water in lake or pond and detection of hitting any obstacles near the boat .

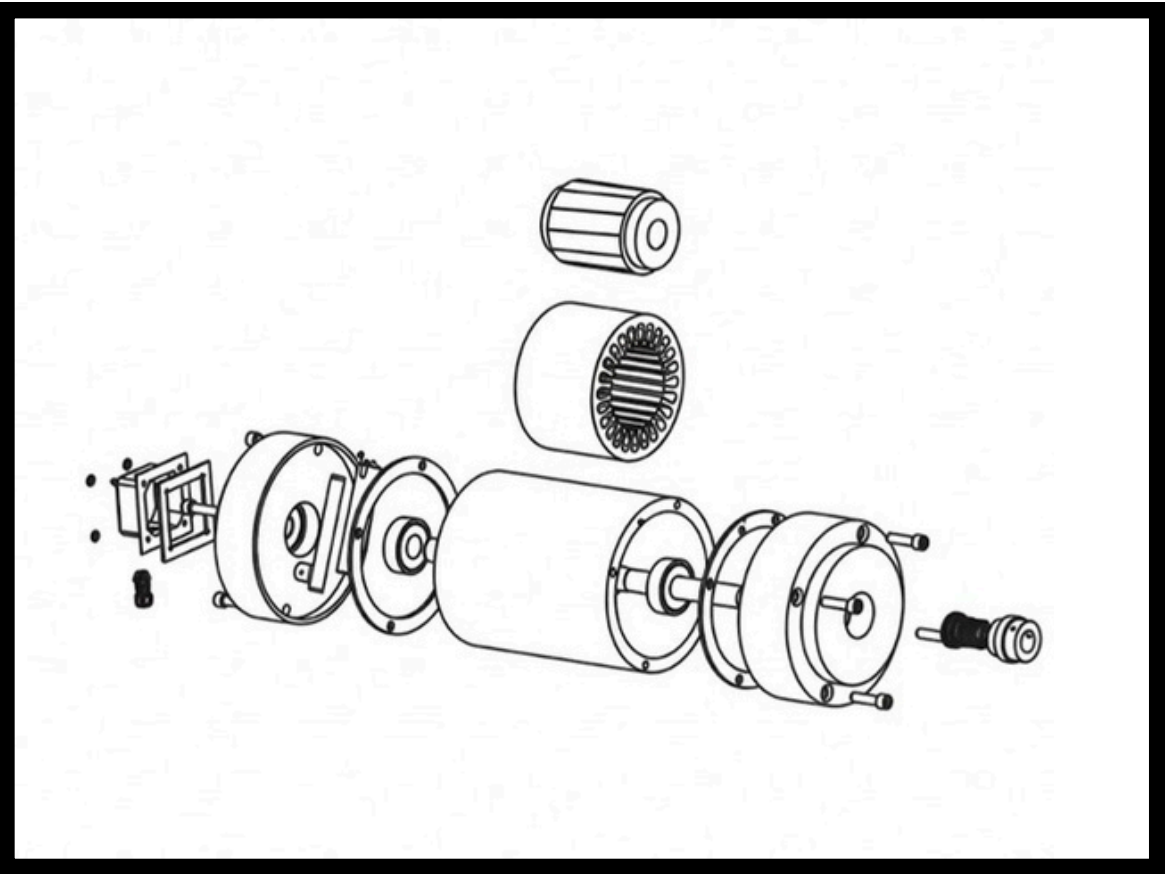


A Motor with Ingress Protection 68

Granted, Patent Number:530868
Dr. S Allirani Prof and Head/EEE

ABSTRACT

The present invention relates to an auxiliary deck machinery motor comprising a motor body which is fully sealed with an insulation. The insulation comprises insulation by use of silicone rubber, polyamide gland (10), mechanical seal and epoxy coating. Further, an anti-condensation heater (8) is positioned inside the motor body. The material used in the insulation for preventing short circuiting is silicone coated fiber glass fabric, wherein fiber glass clock is coated on one side or both sides with bonded silicone rubber. The outer body is covered with epoxy coating.



Fully Automated Domestic Liquid Waste Cleaning System

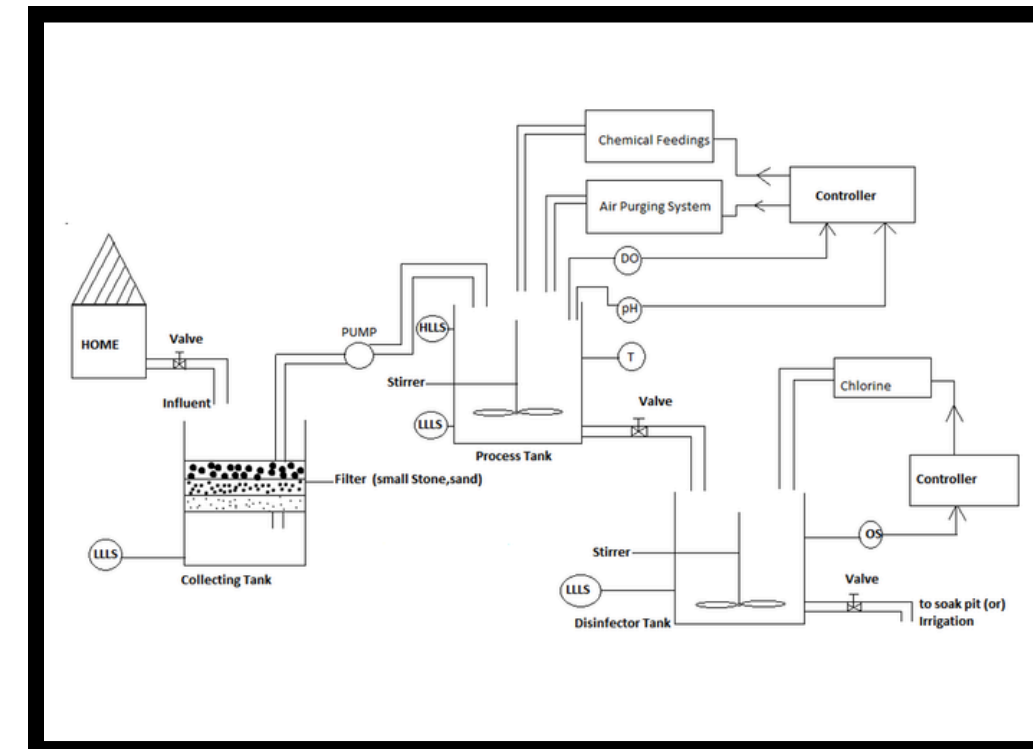
Granted Patent Number : 493791

Dr.B Nagaraj Associate Professor / EIE

Dr.S P Vimal Associate Professor / ECE

ABSTRACT

Wastewater is any water that has been affected by human use. It includes substances such as human waste, food scraps, oils, soaps and chemicals. In homes, this includes water from sinks, showers, bathtubs, toilets, washing machines and dishwashers. Wastewater is full of contaminants including bacteria, chemicals and other toxins. Businesses and industries also contribute their share of used water that must be cleaned. Wastewater treatment plants, also called sewage treatment plants or water pollution control plants, remove most pollutants from wastewater before it is released to local waterways. It contains bacteria, chemicals and other toxins. Its treatment aims at reducing the contaminants to acceptable levels to make the water safe for discharge back into the environment. The proposed Prototype is an automatic wastewater treatment system designed for domestic wastewater treatment applications in capacities ranging from 500 to 1000 Liters /day. The significant features of this system, it consumes less electricity.

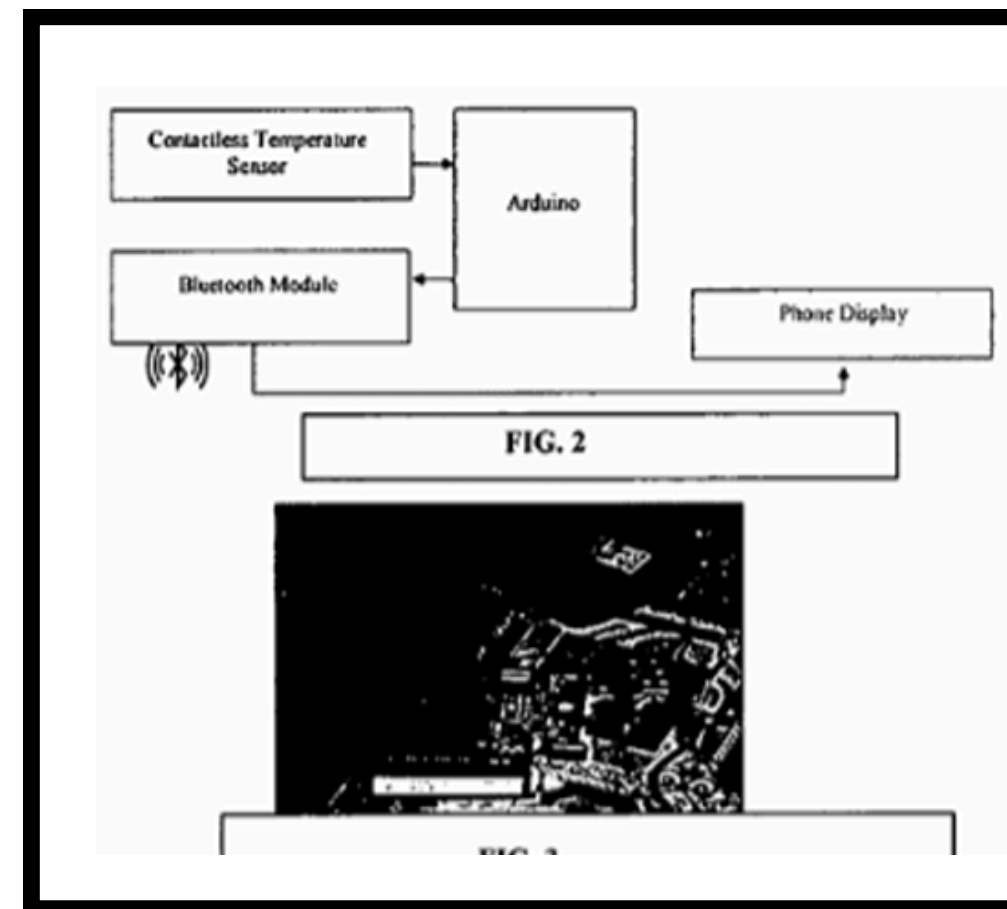


Dual Mode Blanket for Hypothermia

Granted, Patent Number: 526966
Mrs. G Lavanya Assistant Professor(SI.Grade) / BME

ABSTRACT

A dual mode blanket for radiating heat and cool is provided. The dual mode blan, includes a bilayer thermal emitter and a contactless temperature sensor. The bilayer thermal emitter includes a carbon layer that is coated over the nano-polyethylene textile on one side and a copper layer that is coated over. the nano-polyethylene textile on other side. The contactless temperature sensor auto detects patient's body temperature. When the patient's body temperature is greater than degree Celsius, the dual mode blanket is worn by the patient having the carbon coated layer IO inside and the dual mode blanket generates heat on the carbon coated side and increases the temperature inside the blanket by preventing radiating out the heat outside towards the copper coated layer for producing a wanning effect to the patient.

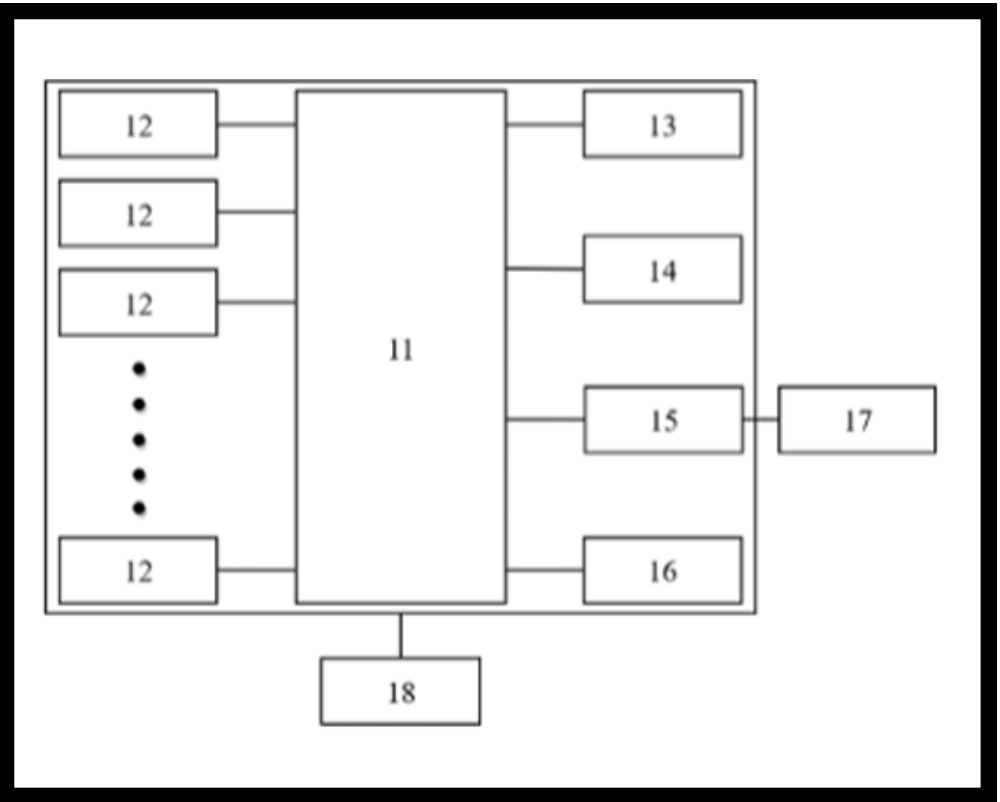


An Apparatus for Surveilling an Automotive Vehicle

Granted, Patent Number: 439976
Dr. Y Dharshan Assistant Professor(Sl.Grade) / EIE
Dr. B Sharmila Professor / EIE

ABSTRACT

The present disclosure is generally related to safety of automotive vehicles. Particularly, the present disclosure is related to surveilling of automotive vehicles. More particularly, the present disclosure is related to an apparatus for surveilling of an automotive vehicle that is configured to facilitate detecting, reporting, and investigating of accidents and incidents.



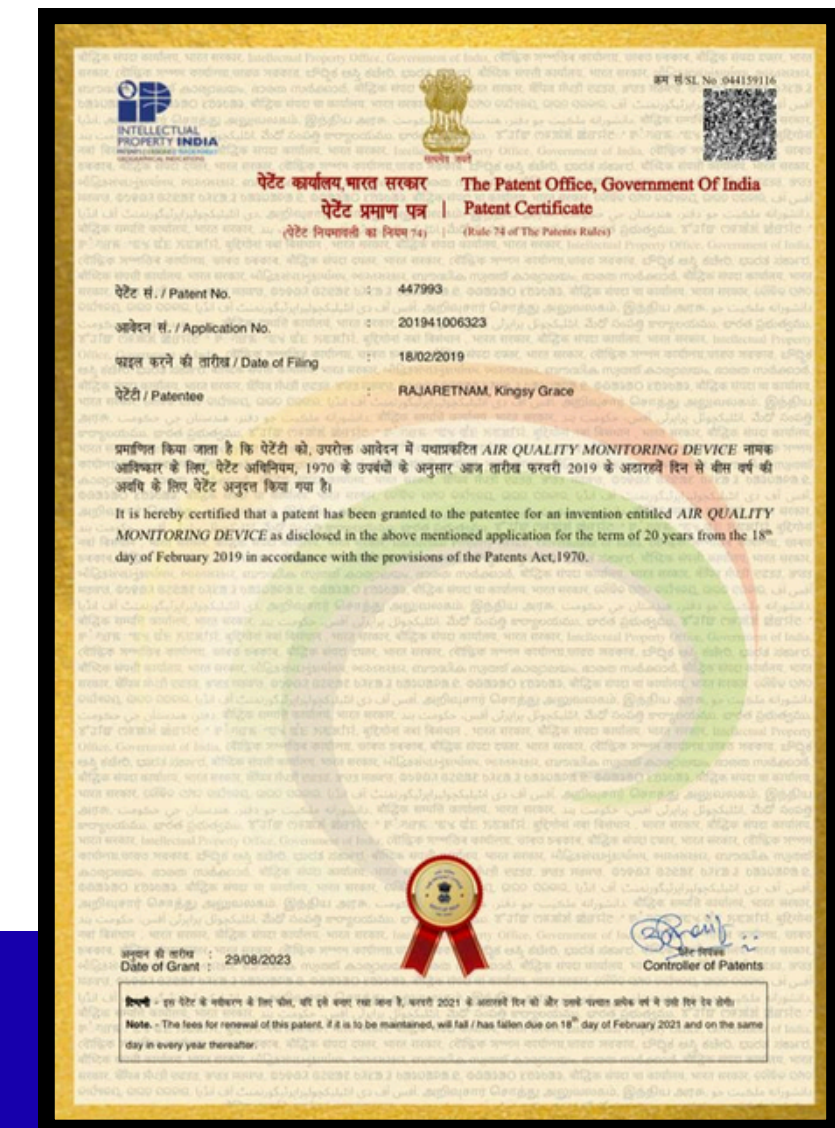
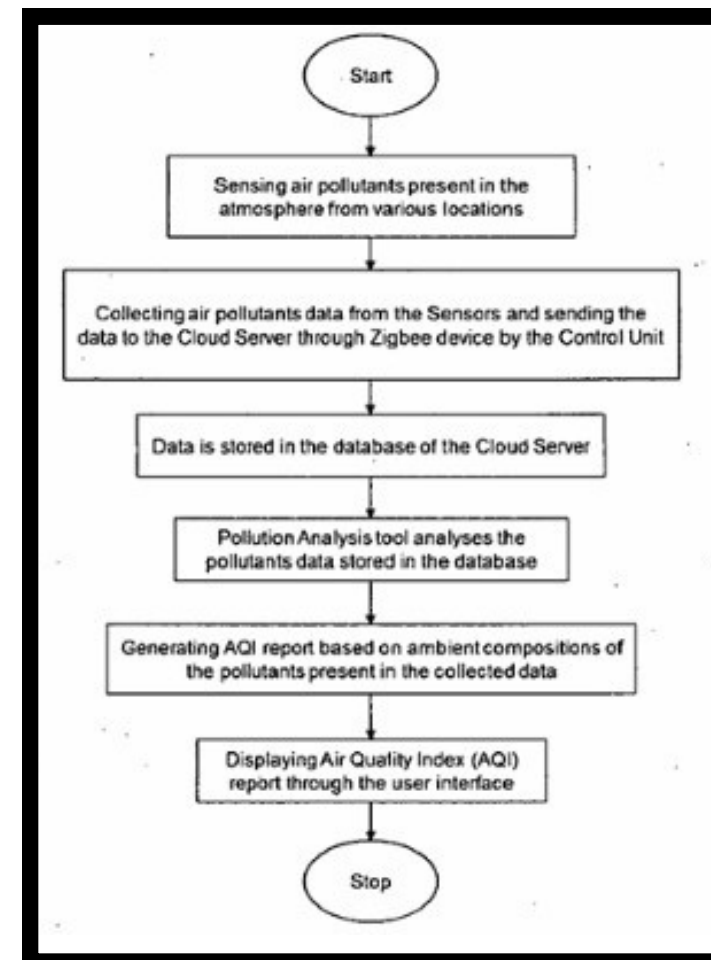
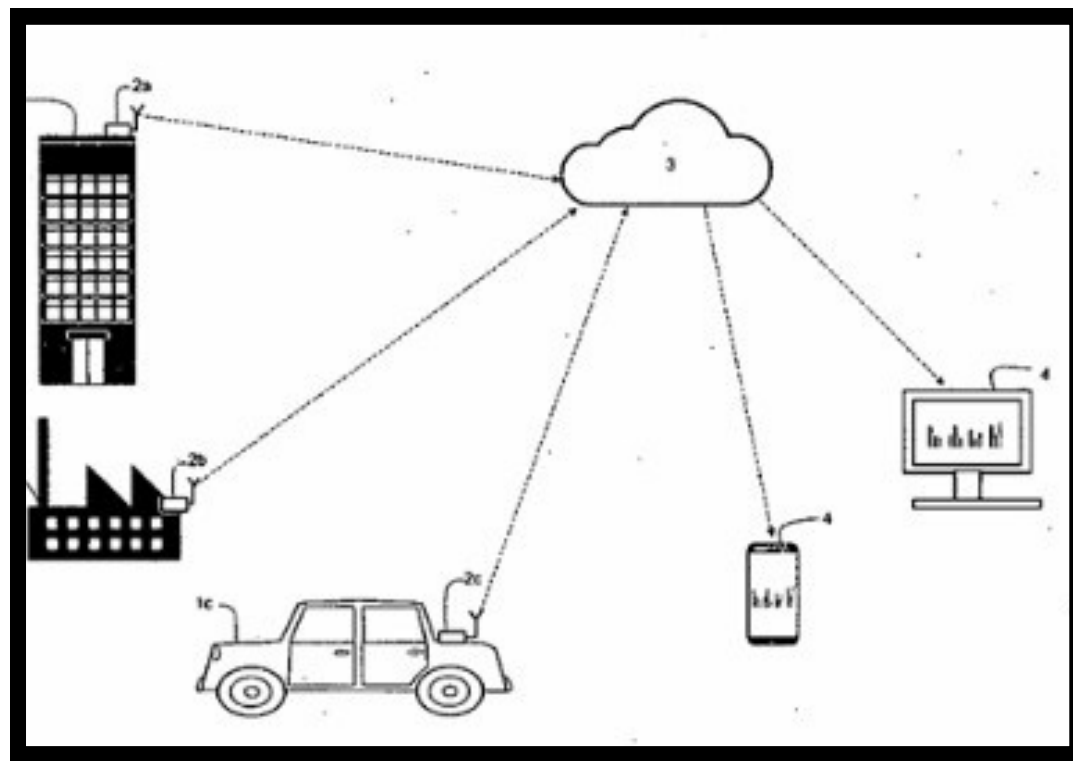
Air Quality Monitoring Device

Granted, Patent Number: 447993

Dr. R Kingsy Grace Professor / CSE

ABSTRACT

The present invention relates to the field of atmospheric-air quality monitoring and evaluation system by using wireless monitoring means. An air quality monitoring system comprises a monitoring device (2) located in a platform (1), cloud server (3) and user interface (4) where in said monitoring device (2) comprises of plurality of sensors (22, 23 and 24) and control unit (25) connected to said cloud server (3) through wireless communication .



IOT Based Multi- Functional Agribot

Granted, Patent Number: 523929

Dr. N Srimath Professor

Dr. N Sathish Kumar Professor / BME

ABSTRACT

The agricultural field is a vast and interesting field to work and it is in need of new inventions to take the domain forward. The IOT based multi-functional agribot is one of its kind of invention which allows the farmers to carry out the following operations simultaneously or by process. The operations include Zero-tilling , seed sowing, water supply and inseminating fertilizers. All the activities are controlled and monitored with mobile phones or laptop from a distant location with the help of IOT.

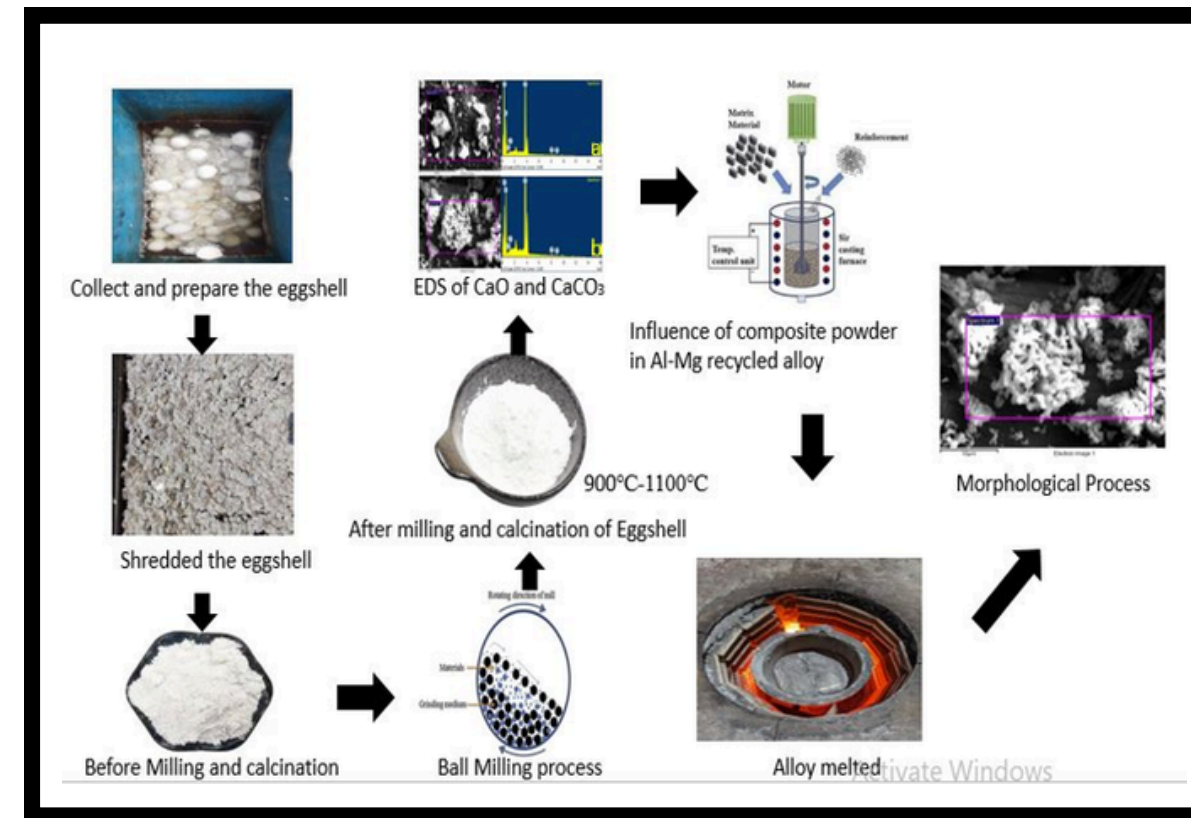


Method for refining molten aluminium alloys using eggshell-derived calcium oxide (CaO) flux to improve mechanical and thermal properties.

Granted, Patent Number : 586199
Dr. C Bhagyanathan Professor / MECH
Dr. Sathiyaseelan Assistant Professor/MECH

ABSTRACT

The aluminium melt was refined using a derivative flux containing waste eggshell-derived calcium oxide to significantly enhance its mechanical and thermal properties. The process involves the thermal decomposition of waste eggshells, converting calcium carbonate into high-purity calcium oxide, which is then used in combination with the derivative flux. The derivative flux reacts with oxide inclusions and non-metallic impurities, enabling their efficient removal, resulting in enhanced melt quality, reduced porosity, and a refined microstructure. The refined aluminium demonstrates increased hardness, improved mechanical strength, and superior thermal conductivity.



Semi-solidus processing of telic scrap to enhance the recovery during secondary aluminium recycling.

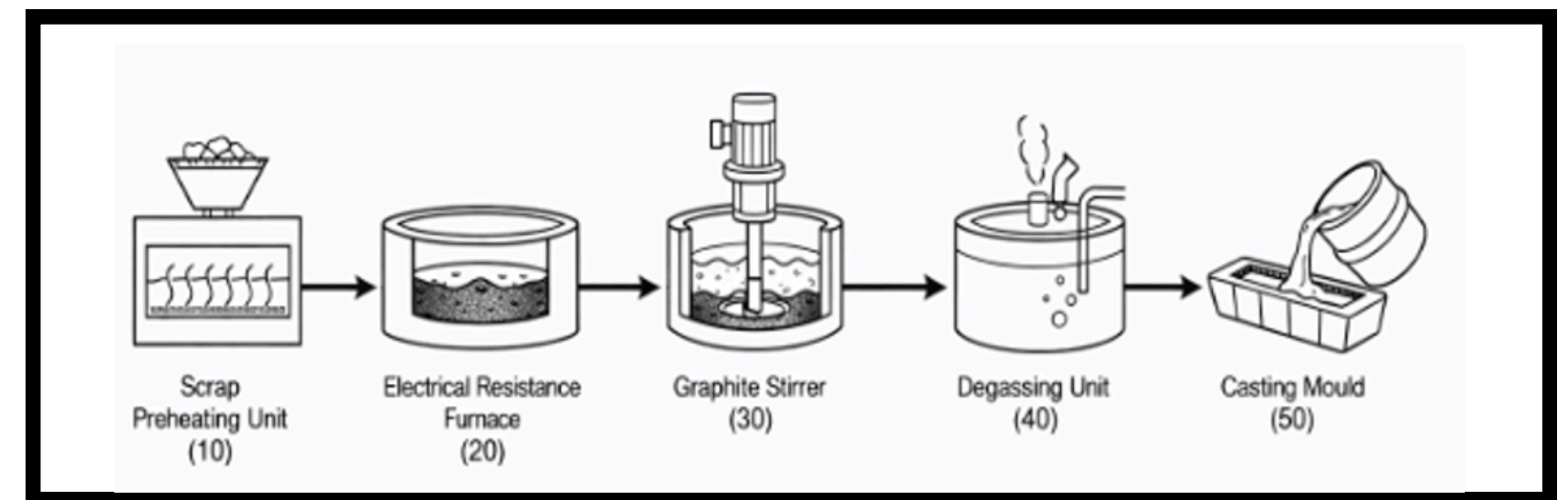
Granted, Patent Number: 588477

Dr.C Bhagyanathan Professor / MECH

Dr. Sathiyaseelan Assistant Professor/MECh

ABSTRACT

This system is designed for recycling low-density aluminium machining turnings during secondary aluminium recycling. The method comprises pre-cleaning the aluminium turnings to remove oil and surface contaminants, preheating the turnings to eliminate moisture, and charging an initial fraction of solid aluminium into an electrical resistance furnace. The aluminium melt is maintained within the semisolid temperature range, after which the remaining machining turnings are introduced under controlled low-shear vortex stirring using a graphite stirring mechanism. The melt is subsequently degassed and cast to obtain recycled aluminium. The system comprises an electrical resistance furnace, a graphite stirring mechanism, a temperature control unit, a degassing unit, and a casting mould. The disclosed method enables the stable incorporation of low-density aluminium turnings under controlled semisolid processing conditions using conventional industrial equipment.



PATENT IN DESIGN



“
Dr. T Anitha
Dr. V Rukkumani
Health Monitoring System
Granted, Design Patent Number:
390399
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Mr. V Parthiban
Solar Dryer with
Integrated Rainwater
Harvesting System
Granted, Design Patent
Number: 434449-001
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Dr. C. Praveenkumar
High Power Converter for BLDC motor
Granted, Design Patent Number:
374380 - 001
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Dr. K Balamurugan
Solar Powered Smart Waste
Management System
Granted, Design Patent
Number:
410763-001
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Dr. S Omprakasam
Helical Compression Spring
Mould Die
Granted, Design Patent
Number: 6369687
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Mr.B Senthil Kumar
AI Based 3D Printed Concrete
Recycling Device
Granted, Design Patent Number:
6439336 (International)
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Dr. S. Bhaggiaraj
Water Purifier System
Granted, Design Patent Number:
423822-001
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Dr. K.Balamurugan
Smart Electromechanical
Motorcycle
Granted, Design Patent Number:
347411-001
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Mr.R Mohankumar,
Dr.C.Praveenkumar
Solar Empowered Agriculture Robot
Granted, Design Patent Number:
379478-001
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Dr.P.Sebastian Vindro Jude,
Dr.C Praveen kumar
High Power Converter For BLDC Motor
Granted, Design Patent Number:
374380-001
”

Dr. R Kingsy grace
Energy Efficient Wireless Sensor
Network with Optimized
Clustering and Compressive
Sampling

Mrs.N.Dheerthi
Mrs.G.Hemalatha
Mrs.J.M. Priyadharsheni
Dr.A.KishoreKumar
Dr.A.Murugarajan
Robot for Rescue Operation in
Shallow Water
Granted, Design Patent Number:
404175-001

Dr. P Chandramohan
Dr. R Raghu
Development of AI-MG/MGAL204 IN-
SITU Composites Synthesized Through
H3BO3 Addition and Investigation
Granted, Design Patent Number:
519051

Mrs. R R RubiaGandhi
Real Time Translator Device for
Spoken Languages
Granted, Design Patent Number:
6416820

Dr. A. Kishore Kumar
Mrs. K Prashanthini
Mrs. M J Priyadharsheni
AI Enabled Smart Tablet Vending
Machine
Granted, Design Patent Number:
417036-001

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Dr.C J Thomas Renald
AI Embedded Interactive Flat Panel Digital
Board
Granted, Design Patent Number:
6476780

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Dr.L Dhiviyalakshmi
Medical Waste Treatment
Device Granted, Design Patent
Number:
402359-001

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Mr. S Sarveswaran
Dr A Murugarajan Adaptive End of
Arm Tooling
Granted, Design Patent Number:
370051-001

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Dr. S P Vimal
Lake Surface Cleaning Boat
Granted, Design Patent
Number: 201641030419

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Dr. C S Manikandababu
Solar grass cutting machine
Granted, Design Patent
Number: 394135-001

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“
**Dr. M.S. Geetha Devasena,
Dr. P. Perumal,
Dr. R. Kingsy Grace,
Mr. V. Krishna Kumar**
**Agricultural Drone for Crop Health
Monitoring**
**Granted, Design Patent Number:
386418-001**”

“
Dr.K.Balachander
**Tracking Band For Domestic
Animals**
**Granted, Design patent Number:
468450-001**”

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Mrs.C.Padmavathy
Smart Walking Stick
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Number: 388583-001**”

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Dr.C.Praveenkumar
**Dual Switch Coupled Inductor
Converter**
**Granted, Design Patent
Number: 380828-001**”

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Dr. C. Praveenkumar
**Brushless DC Motor for Electric
Vehicle**
**Granted, Design Patent
Number: 368818-001**”

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Dr. C S Manikandababu
Milk Quality Analyzer Device
Granted
Design Patent Number:
6298863

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Dr C S Manikandababu
Mammography Test Kit for
Breast Cancer
Granted
Design Patent Number: 389590-
001

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Dr.K.Balamurugan
Energy – Efficient Power
Factor Correction Circuit
with Real-Time Harmonic
Control
Granted
Design patent Number:
202641014159

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Mr. S Sarveswaran,
Dr A Murugarajan
Vacuum Gripper Adapter for Handling
Sand Cores
Granted, Design Patent Number:
405897-001

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Dr.S.Jayanthi
IOT Based Hexacopter for
Mechanization and Automation In Tea
Plantations
Granted, Patent Number: 371017

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Mr. V. Krishna Kumar
IAP – Recommender System: Items
Selecting Recommended System Using
AI Based Programming
Granted, Patent Number :
2020104032

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Dr. K.Sebasthi Rani
Shunt Active Power Filter For
Harmonic Mitigation And Online
Measurement Using Smart Meter
Granted, Patent number:
202041004633

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Dr. Soundararajan A
Snap-Lock Modular Solar Panel
Mounting Frame
Granted, Design patent number:
202541082788

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Ms.S.Alamelu Alias Rajasree
Antenna for Detecting Security Label
Granted Design Patent Number:
371226-001

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Dr. C.Praveenkumar
BLDC Motor for Electric Vehicle
Granted, Design Patent Number:
368818 - 001

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Ms.R R Rubia Gandhi
A System and method for solar
panel performance tracking and
renewable energy management
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Mrs. R. K. Ragavapriya
IoT-based Automated Passenger
Counting And GPS Tracking System
for Public Transportation.
Granted, Patent number:
202441013619

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Dr.K.Balamurugan
IOT – Driven Machine learning
approach for efficient fast
charging of electric vehicle
batteries
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202441013209

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Dr. R. Shanmugasundaram
ANN based Self-Tuned PID Controller
for Speed Control of BLDC Motor

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Dr.P.Sebastian vindro jude
Hybrid Electric vehicle with electric motor
providing strategic power assist to load
balance internal combustion engine
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Dr. R. Shanmugasundaram
IoT Based Mobile Solar Powered
Vegetable Cold Storage Cum dryer
System
Granted, Patent number:
202041045399

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Dr. M. Ezhilarasi
Wireless Sensor Based
Intelligent Vehicle Tyre.
Granted, Patent number:
432138-001

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Dr M kokilamani
AI powered voice activated
mathematics solving device.
Granted, Patent number:
470060-001

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Mr.B.Marisekar
Exoskeleton knee acutator
Granted, Patent number:
393135-001

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Dr. Chindamani Meyyappan
Fiber auto sustainable biodegradable
automotive Components.
Granted, Patent number:
202441051452

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Dr.A.Vadivel
Enhance Electric Two-Wheeler Frame
Design
Granted, Patent number : 435894-001

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Dr. M. Ezhilarasi
Sensor Based Intelligent
Vehicle Tyre Wrapping and
Controlling System
Granted, Patent number:
364221-001

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Mrs. R. K. Ragavapriya
Smart Control System Using IoT For
Electric Vehicles Management
Granted, Patent number:
202341002610

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Dr. K. Sebasthirani
Implementation of RF
Controlled Solar Panel based
Robotic Vehicle.
Granted, Patent number:
202341025103

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Dr C.J Thomas Renald
Chatbot For Texual Conversation
Granted, Patent number:
476429-001

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Dr. K. Balamurugan
Smart Electromechanical Motorcycle
Granted, Patent number:
GJ9467725507 48227T

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Mrs. M. Chindamani
Portable Water Heating Bottle
Granted, Patent number:
2020410089A

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Dr.C.J Thomas Renald
Ai Powered Attendance Monitoring
Device
Patent number:
475947-001

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Dr.S Hema
Smoke Free Low Cost Sanitary
Incinerator
Granted, Patent number: 305963

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Dr C.J Thomas Renald
Digital image Processing For Cancer
Cells Identification
Granted, Patent number:
472127-001

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Dr. C.J Thomas Renald
IOT Based Diagnostic Device For
Detecting Cancer.
Granted, Patent number:
481778-001

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Mr.N.R.Karthik
Assistive Device for Wrist Reduction
Surgery
Granted, Patent number: 398679-001

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FROM IMAGINATION TO INNOVATION

Every invention begins with a spark of imagination. What starts as a simple thought grows through dedication, research, and determination into an innovation that has the power to change lives.

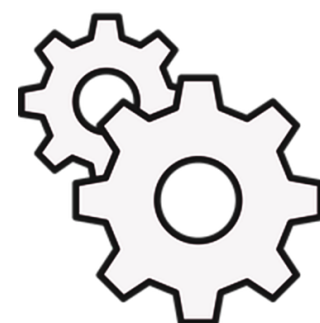
Behind every patent lies a story of persistence, creativity, and the pursuit of excellence. These achievements stand as a testament to the passion of our faculty in advancing knowledge and creating solutions that make a meaningful difference.



Research



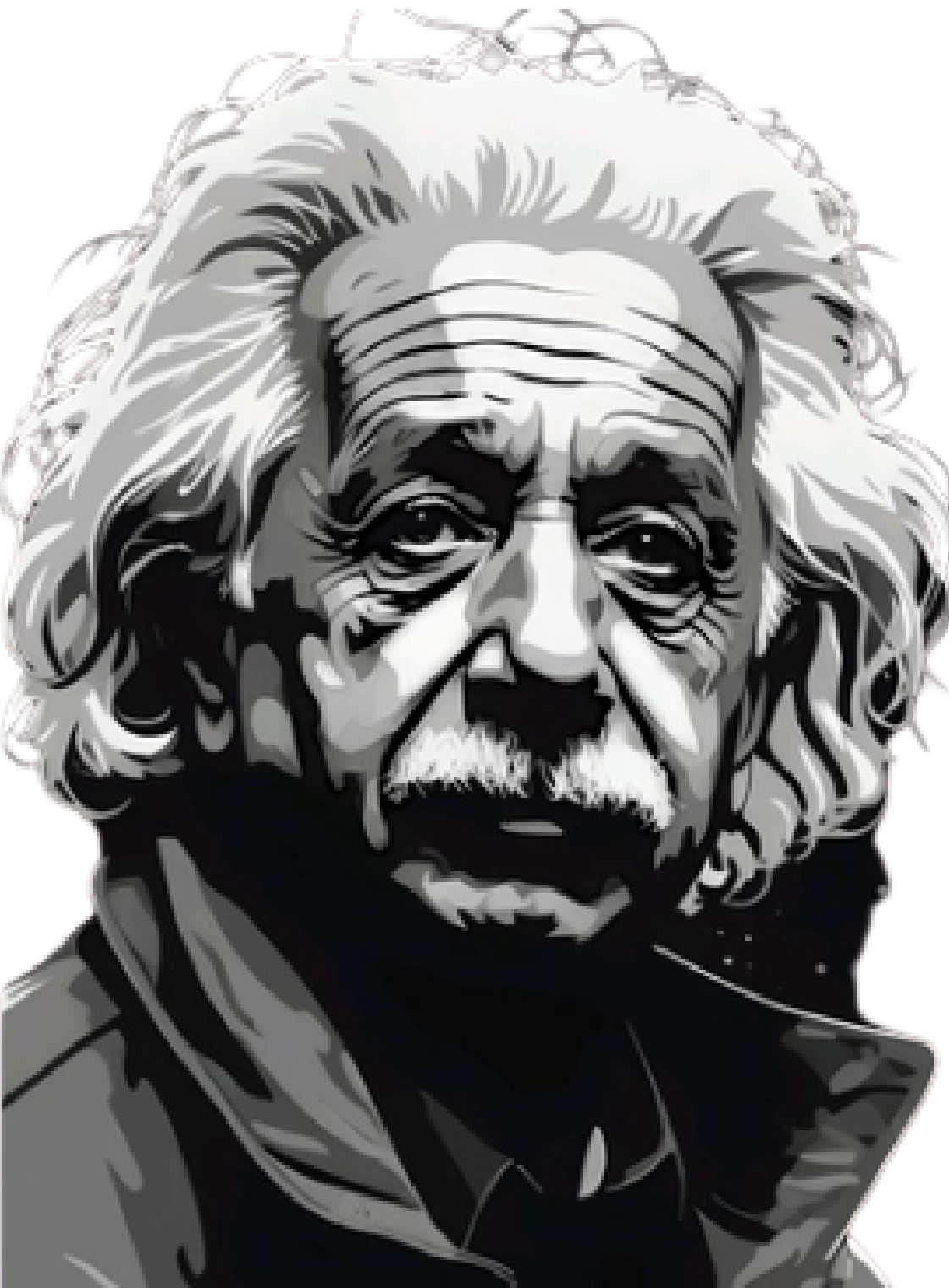
Imagine



Innovate

Turning Ideas Into Impact Through Innovation

**“To invent something,
all you need is
imagination and a big
pile of junk.”**



FOR FURTHER DETAILS



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