INTRODUCTION

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

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

6TH DECEMBER, 2019
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The following are addresses of all the Patent Offices located at different places having their Territorial Jurisdiction on a Zonal basis as shown below:-

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Website: [www.ipindia.nic.in](http://www.ipindia.nic.in)  
[www.patentoffice.nic.in](http://www.patentoffice.nic.in)

All applications, notices, statements or other documents or any fees required by the Patents Act, 1970 and The Patents (Amendment) Act, 2005 or by the Patents (Amendment) Rules, 2006 will be received only at the appropriate offices of the Patent Office. 
Fees: The Fees may either be paid in cash or may be sent by Bank Draft or Cheques payable to the Controller of Patents drawn on a scheduled Bank at the place where the appropriate office is situated.
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बेलाइट: [http://www.ipindia.nic.in](http://www.ipindia.nic.in) व्हिल्स ऑफिस: [www.patentoffice.nic.in](http://www.patentoffice.nic.in) पेटेंट अधिनियम, 1970 तथा पेटेंट (संशोधन) अधिनियम, 2005 भारत पेटेंट (संशोधन) नियम, 2006 द्वारा बंद होने वाली आवेदन, रूपांतरण या अन्य दस्तावेज़ या कोई शुल्क पेटेंट कार्यालय के केवल उपयुक्त कार्यालय में स्वीकृत होंगे।

शुल्क: शुल्क या तो नवं रूप में या Controller of Patents के नाम के देख ब्रांच या ब्रांच के द्वारा भेजी जा सकती है जो उसी स्थान के किसी अनुशंसित बैंक में प्रदर्श हो जहाँ उपयुक्त कार्यालय स्थित है।
SPECIAL NOTICE

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

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

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

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

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

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

SPECIAL NOTICE

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

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application : 16/04/2017

(21) Application No.201711013449 A

(43) Publication Date : 06/12/2019

(54) Title of the invention : ABSOLUTE COORDINATE MODULE BASED NAVIGATION SYSTEM FOR AUTOMATIC GUIDED VEHICLE

(51) International classification : A01B0079000000, G01C0021040000, G01C0021240000, G05D0001020000, G05D0001100000

(31) Priority Document No :NA

(32) Priority Date :NA

(33) Name of priority country :NA

(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

(57) Abstract :
An Automatic guiding vehicle (27) capable to follow a path (25) using an absolute coordinate module (20) which give the coordinate of the position of the automatic guiding vehicle (27) through encoders (2, 3) & ultrasound sensor (24a, 24b, 24c, 24d) feedback with a reference point in the path (25). The two coordinate, yaw and linear coordinate are used to control the position of the automatic guiding vehicle (27) and control it according to the desired path (25) programmed. This absolute coordinate module (20) eliminate the problems of maintenance, high cost & installation of existing navigation systems like inertia navigation, sensor based navigation, magnetic & strip based navigation system. The need of satellite navigation signal and requirements of sensors are also overcome. The designed automatic vehicle guiding system (27) are more flexible and easy to maintain.

No. of Pages : 25 No. of Claims : 10
The present invention relates to reducing the impact and toxicity of Radiation on humans, animals and environment through 100% natural bio assimilable extracts or compounds. Nanocelopatho, a new treatment mechanism system which reducing the impact of the nuclear radiation on humans, animals and environment and can be active through two different methods like (1) Protection of human cells and structures that get modified through the radiation and its toxic effects (2) Reducing the environmental impact through use on and around the radiation site thereby containing and neutralizing the radiation impact. Plant oils & herbal extracts comprising a D-Code-X, generate and emerge through oil application on human and animal body, by using dropper or sprayer. D-Code-X is used through process of spraying plant oils & herbal extracts in an aqueous solution to reduce the harmful effects of atomic, nuclear and gamma radiation. It is used through application of plant oils and herbal extracts either in an aqueous or oil based solution on various body parts of human being and animal to reduce the harmful effects of atomic, nuclear and gamma radiation and is a protective therapy which reduces, mitigates, neutralizes and inactive the harmful effects of radiation exposure. D-Code-X reduces the inflammatory response of radiation exposure on the endocrine, bronchial and cardio vascular system of human being and animal. D-Code-X repairs the damage to body™s DNA and cell structures caused through concentrated and burst of atomic radiation through atomic bomb or nuclear radiation. Use of mixer of plant oils and herbal extracts through applicator/cap or sprayer is holistically accepted and eco friendly, bio-assimilate, very cost effective and has a pleasant smell.

No. of Pages : 10 No. of Claims : 10
Provided herein is a hydrophobic alloy powder comprising nickel and vanadium nitride powders. Also provided herein is a process for the synthesis of the hydrophobic alloy powder.

No. of Pages : 37 No. of Claims : 8
A DEVICE, SYSTEM & METHOD FOR CLOSED LOOP ACTION BASED ON ANALYSIS OF EXTRACTED MACHINE DATA

The present invention provides a device that implements a closed loop autonomous system and method for data extraction and data analytics of machine data acquired from one or more machines. The device extracts machine data including raw machine data from one or more machines, and autonomously employs one or more data analytics techniques on the machine data for predicting one or more future actions, including corrective measures, to be employed by the machine. The predicted future actions depend on the operation and condition of the machine, and machine parts, or quality of products or machine's surrounding environment. The device also monitors and ensures execution of the future action within a safe time period for further ensuring satisfactory results by the machines, failing which the device executes the closed loop method to determine a next possible future action to be implemented at the machines. Fig. 1

No. of Pages : 32 No. of Claims : 20
The present invention relates to a real-time interactive virtual reality system and method. The present invention will help customers to experience real-time custom weather conditions and enjoy their meal. More particularly, the present invention is to establish restaurants, food joints, cafes which can provide its customers the feel of different weather conditions and visual experience through human-made weather conditions and virtual reality augmented technology. Creating an artificial atmosphere or ambience which suits the likeliness of the Clients; customers can also visit various countries/cities virtually.

No. of Pages : 8 No. of Claims : 10
**Title of the Invention:** FORMABLE FILMS, LAMINATE STRUCTURES, AND RELATED METHODS

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**Name of Applicant:**
1) FLEX FILMS (USA) INC.
Address of Applicant: 1221 North Black Branch Road, Elizabethtown, Kentucky 42701 United States of America U.S.A.

**Name of Inventor:**
1) CHATURVEDI, ASHOK
2) SARGEANT, Steven
3) NAIK, Sudhir
4) SIRSAMKAR, Pramod
5) Gupta, Sanjeev
6) Boral, Dipak

**Abstract:**
Embodiments of the disclosure relate to a blister package having a laminate structure that is heat-sealable to a lacquer layer on strain-hardened aluminum foil. The blister package includes a lid layer comprising a strain-hardened aluminum foil, a lacquer layer on a sealing surface of the strain-hardened aluminum foil and a laminate structure sealed directly to the lacquer layer. The laminate structure includes a multilayer film and a plurality of wells formed therethrough. The multilayer film includes a first formable layer of a thermoplastic material and a sealing layer of a copolyester material. The sealing layer overlies the first formable layer and has an outer surface opposite the first formable layer. The sealing layer has crystallinity from 5% to 20% as measured by differential scanning calorimetry (DSC). The outer surface of the sealing layer is sealed directly against the lacquer layer.

No. of Pages: 27 No. of Claims: 30
(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :01/08/2019

(31) Priority Document No :NA

(32) Priority Date :NA

(33) Name of priority country :NA

(36) Name of priority country :NA

(43) Publication Date : 06/12/2019

(51) International classification :A47B51/00

(54) Title of the invention : AUTOMATIC CABINET

(71) Name of Applicant :
1) Rishav Joshi

Address of Applicant : 401, Street Ashok Vatika 2, Jaypee Greens, Greater Noida, Uttar Pradesh, INDIA, 201310 Uttar Pradesh India

(72) Name of Inventor :
1) Rishav Joshi

(57) Abstract :
An automatic lifting cabinet is disclosed. An automatic cabinet comprising a back panel (2), a pulley (3) is secured near the top end of the back panel (2). Another pulley (4) is secured near the bottom end of the back panel (2). A belt (5) is provided around the pulleys (3 & 4) so as to connect these pulleys with each other. A connector (6) secured with the belt (5) is provided to facilitate securing of a shelf (8) with the belt (5). A motor (7) is connected with one of the pulleys (3 & 4). Channels (9) are provided with the back panel such that to guide up and down movement of the shelf (8). A switch is provided to switch on and switch off the motor so as operate the automatic cabinet by the user as and when required.

No. of Pages : 14 No. of Claims : 7
**Title of the invention:** NITROGEN DETECTION TECHNOLOGY

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**Name of Applicant:**
1) SENSELINK TECHNOLOGY PRIVATE LIMITED
Address of Applicant: SK-3/695, B-2, INDIRAPURAM, GHAZIABAD, UTTAR PRADESH-201014, INDIA Uttar Pradesh India

**Name of Inventor:**
1) LALIT GAUTAM

**Abstract:**
A novel approach in determining essential nutrients content present in soil using controlled molecule excitation and capturing absorption wavelength of these macro nutrients. The inspiration has been taken from Raman scattering and spectroscopy which has rarely been applied in nutrients identification, characterisation or analysis due to several interfering external factors such as excess fluorescence. This paper proposes a solution in accurately measuring the soil nutrient content which can greatly assist in agrology and agronomics. Continuous cropping without effective measurement of soil nutrients affects the sustainability of the crops. The proposed method poses its relevance for pre-plantation interval. A photodiode and three LEDs as a light source are used for transmittance and reflectance capture. The wavelength of LEDs is in accordance to absorption band of wavelength of each nutrient. The nutrient in soil tends to absorb the light emitted from particular LED and reflects the remaining which the photodiode reads and give the value. The system makes use of a microcontroller for data acquisition which helps to read the reflected wavelength. On the basis of the values obtained from three LEDs for N, P, K the level of the particular nutrient can be judged accordingly.

No. of Pages: 8  No. of Claims: 1
**Title of the invention:** SYSTEM AND METHOD FOR OPERATING A WORKOUT EQUIPMENT

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**Abstract:**

[0068] System and method for operating a workout equipment is provided. The system includes a plurality of monitoring devices and a communication device. The communication device includes a registration subsystem configured to enable one or more users to register on a platform upon receiving a plurality of user details from the one or more users, a code scanning subsystem configured to scan a unique code associated with at least one of the workout equipment by the one or more users on the platform via a scanning device and unlock at least one of the workout equipment, an adjustment subsystem configured to adjust one or more parameters associated with at least one of an unlocked workout equipment using one or more entities upon receiving an instruction from the one or more users. The system enables authorised access of the workout equipment. Hence, making the system more user friendly, reliable and efficient. FIG. 1

No. of Pages: 26
No. of Claims: 10
The present invention describes nanoemulsion composition and method of preparation of the pharmaceutical nanoemulsion for drug delivery in the condition of neuropathic pain. The nanoemulsion formulation of the present invention comprises Capsaicin and Curcumin as therapeutic agent I and therapeutic agent II, which are encapsulated for their co-delivery. The nanoemulsion is prepared by using at least one surfactant such as Labrasol and at least one co-surfactant such as Glycerol in water using high-speed homogenizer and ultra-sonicator for homogenization. The nanoparticles having therapeutic agents I & II and surfactant of the nanoemulsion formulation are encapsulated for effective delivery of the composition onsite. The nanoemulsions can be delivered via multiple routes such as Topical, intra-nasal and intra-venous, etc. The formulated nanoemulsion which is the combination of the (Capsaicin-Curcumin) is effectively able to reduce the level of various pro-inflammatory cytokines and increase the level of anti-inflammatory cytokines which are expressed during inflammatory neuropathic pain conditions.

No. of Pages: 20
No. of Claims: 11
Title of the invention: TO DEVELOP SYSTEM AND METHOD OF UAV’S WITH SWARM TECHNOLOGY

Abstract:
Relief Operations, Drone swarm technologythe ability of drones to autonomously make decisions based on shared informationhas the potential to revolutionize the dynamics of conflict. And were inching ever closer to seeing this potential unleashed. In fact, swarms will have significant applications to almost every area of national and homeland security. Swarms of drones could search the oceans for adversary submarines. Drones could disperse over large areas to identify and eliminate hostile surface-to-air missiles and other air defenses. Drone swarms could potentially even serve as novel missile defenses, blocking incoming hypersonic missiles. On the homeland security front, security swarms equipped with chemical, biological, radiological, and nuclear (CBRN) detectors, facial recognition, anti-drone weapons, and other capabilities offer defenses against a range of threats. But while drones swarms represent a major technological advancement, unlocking their full potential will require developing capabilities centered around four key areas: swarm size, customization, diversity, and hardening. Customizable drone swarms offer flexibility to commanders, enabling them to add or remove drones as needed. This requires common standards for inter-drone communication, so that new drones can easily be added to the swarm. Similarly, the swarm must be able to adapt to the removal of drone, either intentionally or through hostile action. Customization also allows commanders to adapt the swarm to the needs of a situation. For missions demanding a smaller profile, a commander may remove drones. A commander may also vary the capabilities of the swarm itself, adding drones equipped with different types of sensors, weapons, or other payloads.

No. of Pages : 5 No. of Claims : 8
Title of the invention: ELECTRIC VEHICLE WITH WIND TURBINE AND SOLAR PANEL POWER SOURCED-CAR, SCOOTER, BUS & TRUCKS

<table>
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<th>(51) International classification:</th>
<th>(71) Name of Applicant: 1) ANURAG VARSHNEY</th>
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<td>F03D 13/00 F03D 9/00</td>
<td>Address of Applicant: II-B/159, NEHRU NAGAR, GHAZIABAD UTTAR PRADESH-201001, INDIA Utter Pradesh India</td>
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| (31) Priority Document No: NA | (32) Priority Date: NA |
| (33) Name of priority country: NA | (86) International Application No: NA |
| (87) International Publication No: NA | (61) Patent of Addition to Application Number: NA |
| (62) Divisional to Application Number: NA | (Filing Date: NA) |

Abstract:
Electrification of Transportation vehicle is necessary in this decade, now we have invented electric vehicle like 04 wheeler car, 02 wheeler scooter, trucks and commercial vehicle which is operated by Electric lithium battery and automatic charging from solar panel and Wind turbine during run or stop time. Electric vehicle battery recharge from wind turbine and solar panel on continuous basis while vehicle is running or stop but it automatic cut when battery is charged or vehicle is not in operation or breaks down. Electric Car is operated from Wind turbine also when it get required RPM and it runs on high way where it can run easily without any halt or stop for long time. It is actually a hybrid electric car and uses electric power with 02 supportive options as wind turbine and solar power that has been placed outside of the car. The turbine will produce wind energy to help supply the car with energy, when it placed on the outside of the electric vehicle.

No. of Pages: 5 No. of Claims: 9
A system for intelligent fire safety and building evacuation architecture designed based on the LORA communication. The novel architectural system consists of the end device(102), controlling unit, central controlling unit and end user interface to detect fire and safety exit. The long range communication is established using LoRa gateway(105) to establish a connection between the controlling unit and the end user. The vision nodes are used to find the smoke and people density during fire emergency. The evacuation path is displayed using the LED display(l 11) for the disaster victims to reach safe exit. This system is used to prevent major casualties by early detection of fire and save human life from danger.

No. of Pages : 26 No. of Claims : 8
The present invention discloses a novel oral gold nanoparticle formulation of insulin. The said formulation is prepared by reduction of chloroauric acid with modified apple polysaccharide and the conjugation with insulin. The said formulation decreases blood glucose level and improves body weight, lipid profile, urea, creatinine and liver parameters.

No. of Pages : 17  No. of Claims : 7
Title of the invention: HONEY WITH INCREASED MEDICINAL VALUE AND PROCESS THEREOF

Abstract:
Flavored honey with increased medicinal value for patients suffering from fever, cold and cough. The shelf life of the honey is increased by six months and can readily be used as a home remedy.

No. of Pages: 8  No. of Claims: 5
An IoT enabled device to monitor the neonatal suffering in pain and analysis the intensity the of pain. The device monitor the neonatal in the NICU, where the video of the neonatal is recorded and the neonatal facial image obtained to analysis the intensity of the pain suffered through Deep Network and the level of the pain is classified through pain index. The device alerts the caregiver based on the intensity of the pain being sensed by the neonatal and also displays the pain index. The IoT enabled device provides the recorded video of the neonatal to analyze the data for further identification. This is a low cost device and easy to install.

No. of Pages : 18 No. of Claims : 10
A novel system employed for monitoring various critical parameters of oil pipeline using IoT and LoRa. The system consists of monitoring, detection, communication and data analysis. Various smart wireless sensors are used to monitor critical parameters which are sent to 2.4 GHz RF controller board and LoRa controller board via signal condition and optimization. The data is communicated to servers via LoRa gate way. Various parameters like fire, leaks, corrosion are also detected and communicated to end user via LoRa gate way. In case of any abnormal issues found in data hooter, drones are activated from safety operation controller and drone yard.

No. of Pages : 26 No. of Claims : 6
Disclosed is an autonomous robot for harvesting Jatropha curcas plant as Jatropha seeds uses for bio-diesel. The present invention provides the cost-effective solution to pick the ripe Jatropha fruit, pluck that fruit and collects in the container. The present invention also facilitates picking the ripe jatropha fruit form the edge of tree without damaging the fruit.

No. of Pages : 16 No. of Claims : 9
(54) Title of the invention : CLOCK GLOW

(51) International classification : H04N 7/00, H04R 1/00, F21V 33/00

(31) Priority Document No : NA
(32) Priority Date : NA
(33) Name of priority country : NA
(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

(57) Abstract :
A device designed with LED to sense the acoustic signal within a certain distance as per the specified range and the glow light will turn on for a predefined time span. The device is powered by rechargeable/replace battery and can by mounted using double side tape. The device can be mounted on any existing clock to view the time in the dark without causing disturbance to the surrounding.

No. of Pages : 15 No. of Claims : 6
(54) Title of the invention : A DEVICE FOR DETECTION OF CONTAMINATION IN GREEN VEGETABLES

(51) International classification :F21S 4/00 D06P 1/00
(71) Name of Applicant :
1) Lovely Professional University
   Address of Applicant : Lovely Professional University,
   Jalandhar-Delhi GT road Phagwara Punjab India
(31) Priority Document No : NA
(32) Priority Date : NA
(33) Name of priority country : NA
(86) International Application No Filing Date : NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number Filing Date : NA
(62) Divisional to Application Number Filing Date : NA

(72) Name of Inventor :
1) Mandeep Singh
2) Ruhul Amin Choudhury
3) Lovi Raj Gupta

(57) Abstract :
The present invention discloses a device for the detection of contamination in green vegetables. The device is handy and portable. The said contamination in the green vegetables is dye. The presence of contamination is indicated on a LED bar display (5).

No. of Pages : 11 No. of Claims : 8
(54) Title of the invention : A NOVEL MOSQUITO REPELLENT FORMULATION

(51) International classification : A01N 25/00
A01N 65/00
A01N 31/00

(31) Priority Document No : NA
(32) Priority Date : NA
(33) Name of priority country : NA

(86) International Application No
Filing Date : NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number
Filing Date : NA
(62) Divisional to Application Number
Filing Date : NA

(57) Abstract :
The present invention discloses a novel mosquito repellent formulation containing ethion, solvent, antioxidant, perfume and emulsifier. The said formulation is effective against insecticide resistant mosquitoes. The said formulation affect mammals to a minimal level and is stable during the storage.

No. of Pages : 8 No. of Claims : 6
Title of the invention: SINK/WASH BASIN DRAINAGE CLEANER

Abstract:
A sink/wash basin drainage cleaner which is a microcontroller (8) controlled device which is connected to the sink/wash basin (1) for the automatic cleaning of the drain. The system mainly consists of a PID controlled heater (3), an automatic dispensing unit (4) of cleansing agent, an ultrasonic generator (5), an electronic gate valve (6). The system automatically dispense the cleansing agent at a PID (Proportional-integral-derivative) controlled set temperature which is followed by ultrasonic assisted agitating for efficient mixing of cleansing agent with the waste water/liquids/solids ultimately discharging out of the drain pipe (2).

No. of Pages: 16 No. of Claims: 7
The present invention discloses a novel process for production of pearls. The said pearl contains an insert. The insert of the pearl is biodegradable and bio-compatible. The insert of the pearl of the present invention can be easily removed to provide a pearl with natural hole.

No. of Pages : 7  No. of Claims : 6
**Title of the invention**: AN ANTICANCER PHARMACEUTICAL COMPOSITION AND PROCESS OF PREPARATION THEREOF

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<td>Address of Applicant: Lovely Professional University, Jalandhar-Delhi GT road Phagwara Punjab India</td>
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<tr>
<td>:NA</td>
<td>1) Anu Bansal</td>
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<td>2) Neeta Raj Sharma</td>
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<td>3) Nagaraja Prakash</td>
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| (31) Priority Date | :NA |
| (32) Name of priority country | :NA |
| (36) International Application No | :NA |
| Filing Date | :NA |
| (87) International Publication No | :NA |
| Filing Date | :NA |
| (61) Patent of Addition to Application Number | :NA |
| Filing Date | :NA |
| (62) Divisional to Application Number | :NA |
| Filing Date | :NA |

**Abstract**: The present invention discloses a novel carvacrol derivative. The said derivative is a metal complex. The said derivative possesses anticancer activity. The invention also discloses a method of preparation of the said carvacrol derivative.

No. of Pages: 10 No. of Claims: 4
Title of the invention: A SYSTEM FOR LIVE DETECTION OF HUMAN IN DISASTER

Abstract:
A system for analyzing the level and seriousness of casualty by differentiating between live and dead people based on image processing and GPS co-ordinates. The system is capable enough for even analyzing people under debris.

No. of Pages: 12  No. of Claims: 5
Disclosed is a system for an automatic adjustment of volume for TV/Speakers based on distance between user and speaker. The present invention takes the input from remote by double tapping on the buttons and automatically adjusts the volume based on signal strength. The present invention further facilitates a cost effective and convenient solution to control the volume for TV/Speakers.

No. of Pages: 11  No. of Claims: 5
The present invention discloses a novel pharmaceutical formulation for anti-arithmetic activity. The said formulation is liposomes and consist of a prodrug of sulfapyridine. The said formulation has increases antiarthritic activity.

No. of Pages : 28 No. of Claims : 9
(12) PATENT APPLICATION PUBLICATION  
(19) INDIA  
(22) Date of filing of Application :23/11/2019  
(43) Publication Date : 06/12/2019

(54) Title of the invention : A NOVEL MOSQUITO REPELLENT FORMULATION

| (51) International classification | :A01N35/02 |
| (31) Priority Document No | :NA |
| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
| (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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(72) Name of Inventor :  
1) Lovleen

(57) Abstract :  
The present invention discloses a novel mosquito repellent formulation containing ethion, solvent, antioxidant, perfume and emulsifier. The said formulation is effective against insecticide resistant mosquitoes. The said formulation affect mammals to a minimal level and is stable during the storage.

No. of Pages : 8  No. of Claims : 6
**Title of the invention : SMART SPATULA AND PROCESS THEREOF**

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<td>Address of Applicant: Lovely Professional University, Jalandhar-Delhi G.T. Road, Phagwara 144411, Punjab, India</td>
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**Priority Document No**: NA  
**Priority Date**: NA  
**Name of priority country**: NA  
**International Application No**: NA  
**Filing Date**: NA  
**International Publication No**: NA  
**Filing Date**: NA  

**Abstract**:
A smart spatula used for various types of Indian cooking. The spatula works as per pre-defined temperature range and sprays oil as per the requirements. The spatula consists of LED indicators to indicate the temperature of utensil. The said system can be used in any cooking method on the flame. The spatula is handy and easy to use with rechargeable battery.

No. of Pages : 10  
No. of Claims : 7
Title of the invention: MANAGEMENT AND SECURITY MODEL FOR IOT NETWORK USING SDN TECHNOLOGY

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Name of Applicant:
1) Dr. Ashok Alaknanda
2) Dr. Dumka Ankur

Address of Applicant:
G.B. Pant University of Agriculture & Technology, Pantnagar, Uttarakhand, India

Name of Inventor:
1) Dr. Ashok Alaknanda
2) Dr. Dumka Ankur

Abstract:
A Management and Security Model for IoT device network using SDN technology for maintaining database (1) of number of IoT devices within a network. The invention makes it easy to maintain large IoT network (3) consisting of lakhs of IoT devices with minimal time complexity. The Management and Security Model for IoT device network using SDN technology as disclosed in this invention is a secured network which helps in intranet DDoS attack or attack from any intruder and can be used to prevent authentication of IoT devices. Reference: Fig. 3

No. of Pages: 13 No. of Claims: 11
Title of the invention : COMPUTER IMPLEMENTED METHOD FOR GENERATING NOTIFICATION DURING CALL WITHOUT USING INTERNET IN WIRELESS COMMUNICATION

Abstract :
The present invention disclosure is related to a computer implemented method for generating notification during calls without using internet in wireless communication. The present invention provides an internet free method for advance notification system from the caller. This advance notification generated by calling time on calling party's devise. The incoming calls getting an assigned text as subject of calling from a caller. Caller party can recognize the caller identity and a picture on the incoming telephone call. The interactive response menu may include a menu option to activate important notification. The system comprises a receiving request to connect the call from the calling party. Additionally, the caller devices of the incoming call are alerted in harmony with the exact succession that would be either added on incoming call or not.

No. of Pages : 21 No. of Claims : 10
### Title of the invention
SYSTEM AND METHOD FOR MONITORING SANITATION STATUS OF TOILET

### International classification
- A47K 13/00, H04N5/2253

### Priority Document
- No. : NA
- Date: NA
- Country: NA

### International Application
- No.: NA
- Date: NA
- Country: NA

### Name of Applicant
1. Dr. Harmunish Taneja
2. Dr. Kavita Taneja
3. Dr. Rohit Kumar

### Address of Applicant
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### Name of Inventor
1. Dr. Harmunish Taneja
2. Dr. Kavita Taneja
3. Dr. Rohit Kumar

### Abstract
The present disclosure relates to a monitoring system for cleanliness of a toilet, the monitoring system includes an image sensor configured to capture one or more images of a toilet seat, a processor to execute a cleaning status analysis engine to analyse the captured images to determine the sanitation status, and a transceiver to transmit, through an ad hoc network, the real-time sanitation status to one or more computing devices.

No. of Pages: 7 No. of Claims: 10
The present invention relates to a method for detecting malware, comprising the steps of accepting a document or module on which the analysis needs to take place, performing document type analysis on the document, carrying out comparison between the document and a ciphered document in order to understand the similarity factor between both the documents, monitoring the replacement of the document with the ciphered document, identifying a module that accepts these documents to merge it into a single one, flagging the document which are found infested with a malware and performing N gram analysis to compare call sequence patterns of all the flagged documents with the malware database which contains different types of malwares.

No. of Pages: 10 No. of Claims: 6
The present invention relates to an anti-theft system for vehicle, comprising a driver circuit associated to power supply unit of the vehicle 1 that converts dc power into ac power, a LC circuit linked to the driver circuit to produce a resonance frequency for enhancing the voltage, a transformer with primary and secondary windings linked to the driver circuit that step-up the voltage, a leverage unit 2 mounted at the lower surface of the vehicle 1 linked to the secondary winding that completes electric circuit by providing earthing to the system, multiple sensors associated to the vehicle 1 that detects the unauthorized person in vicinity of the vehicle 1 and activates an alerting module installed in the vehicle 1 that alerts the persons about the consequences of touching the vehicle 1, wherein the unauthorized person experience an electric shock on touching of the vehicle 1. Ref. Fig. 1, 2

No. of Pages : 12 No. of Claims : 9
**Title of the invention:** ROBOT CONTROL SYSTEM

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<td>Name of Applicant:</td>
<td>2) Dr. Nitin Rakesh</td>
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<td>Name of Inventor:</td>
<td>5) Dr. Sudeshna Chakraborty</td>
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<td>Name of Inventor:</td>
<td>6) Dr. Vipin Tyagi</td>
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**Abstract:**
The present invention relates to a robot control system, comprising a brain computer interface unit having multiple sensors associated to the system that extracts brain activities of a person and generates electric signals related to the activities by employing electroencephalography, a camera attached in the system for capturing multiple images/videos of the person, a sign language perceptive module linked to the camera for acquiring the images and extracting sign language expressions from the images/videos, which are further transmitted in the form of signals and a robot configured with an adaptable vision unit that receives the signals from the interface unit and perceptive module and performs various operations as commanded by the person. Ref. Fig. 1

No. of Pages: 10 No. of Claims: 5
A method of developing porous bio ceramic foam of HA-TiO2 using plasma spray wherein the HA and TiO2 are mixed in equal proportion and mechanically alloyed with TiH2 (blowing agent) using high energy plenary ball mill to obtain a nano-scale and homogeneous mixture using tungsten carbide. The powder mixture of HA-TiO2-TiH2 is sprayed towards P-Ti substrate specimens using plasma spray deposition technique after mechanical alloying. The bioceramic foam developed has excellent corrosion resistance and bioactivity. The method is relatively simpler and more reliable than other known methods. The developed bioceramic foam has high adhesion strength with the substrate.
A novel process of making mosquito repellent which consists of extraction of citronella oil from citronella plant and mixing it with other herbs and using the oil with mineral oil as a mosquito repellent.

No. of Pages : 13 No. of Claims : 5
Title of the invention: INTELLIGENT AUTOMATIC HEADLIGHT SYSTEM

Abstract:
The present system discloses an intelligent automatic headlight system which works as per day and night. The light intensity decreases and increases as per the vehicles coming from opposite side.

No. of Pages: 9
No. of Claims: 5
Title of the invention: PROCESS FOR LIVE-RECONSTRUCTION OF A COVERED FACE THROUGH THERMAL IMAGING AND DEEP LEARNING

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Name of Applicant: 1) Lovely Professional University
Address of Applicant: Lovely Professional University Jalandhar-Delhi G.T. Road, Phagwara, Punjab-144 411, India.

Name of Inventor: 1) SINGH, Reena 2) CHOPRA, Chirag 3) SINGH, Rajesh 4) PRAJAPAT, Mahesh Kumar

Abstract:
Disclosed is a process for reconstruction of facial features while face is covered with any mask or a veil by using thermal imaging and deep learning algorithms. The present invention uses thermal imaging camera and digital camera for capturing the image. The present invention provides an accurate description for reconstruction of image features by mapping gap between the mask or a veil and the face. The present invention further facilitates the availability of uploading the raw data after reconstruction on cloud server and it helps in investigation of acts of vandalism or other criminal cases.

No. of Pages: 15 No. of Claims: 7
Disclosed invention provides authentication to users when signup on website by assigning profile reputation score. The present invention discloses a method for AMI based on OAuth protocol and verifies the identity to reduce the number of fake accounts on websites. The present invention also facilitates security to users personal information as while verification on website only profile reputation score/signals is required.

No. of Pages : 10 No. of Claims : 5
The process identifies the brain gender of a person based on a quiz based activity. The brain gender of person can be a male brain, a female brain or a mixed brain. It categorises the brain gender of a person based on scores of a person which is generally prepared as per answers given by the person. The proposed process can prove to be helpful while recruiting a person by the employer and even for better understanding of a person. This process can also be used for personality assessment.

No. of Pages : 15 No. of Claims : 6
Title of the invention: A METHOD OF REDUCING ELECTRICITY CONSUMPTION

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</table>

Name of Applicant: 1) Lovely Professional University
Address of Applicant: Lovely Professional University Jalandhar Delhi GT road Phagwara Punjab India

Name of Inventor: 1) Manikant Roy

Abstract:
A system for reducing electricity consumption which consists of a 360 degree Camera (1) which stores the captured images in Raspberry Pi (2) and per the algorithm the signals are sent to the two relay channel (3). Depending upon the inactivity in the area where system is installed, the signals are transmitted to fans (4) and lights (5) which switch off automatically as per time of inactivity and alarm time threshold set in the system.

No. of Pages: 12  No. of Claims: 7
## Title of the invention: SUSTAINABLE ROTATING BIOLOGICAL CONTACTOR

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<td>(86) International Application No</td>
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<td>Filing Date</td>
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</table>

### Name of Applicant:

1. Lovely Professional University

Address of Applicant: Lovely Professional University Jalandhar Delhi GT road Phagwara Punjab India

### Name of Inventor:

1. Pushpendra Kumar Sharma
2. R L Sharma
3. Vishal Deep Singh
4. Prashant Kumar Pandey
5. Bishnu Kant Shukla

### Abstract:

A sustainable rotating biological contactor is a secondary biological wastewater treatment system in which natural flowing water energy is being utilized for rotating not the drum but the radial baffle blades (6) attached to the shaft (8) rotating by efficient bearings which provides more surface area thereby making the system more efficient. The device consists of simple plates (6) attached radially to the shaft (8) rotating about its axis through the bearings. The developed system is more eco-friendly, cost effective and beneficial to the society.

No. of Pages: 11 No. of Claims: 7
(54) Title of the invention: A NOVEL DRONE SYSTEM FOR OFFSHORE SEISMIC ACQUISITION

| (51) International classification: | :G01V 1/00 |
| (31) Priority Document No: | :NA |
| (32) Priority Date: | :NA |
| (33) Name of priority country: | :NA |
| (86) International Application No: | :NA |
| Filing Date: | :NA |
| (87) International Publication No: | :NA |
| (61) Patent of Addition to Application Number Filing Date: | :NA |
| (62) Divisional to Application Number Filing Date: | :NA |

(71) Name of Applicant:
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   Address of Applicant: Lovely Professional University Jalandhar Delhi Road Phagwara Punjab India

(72) Name of Inventor:
1) Adityam Dutta
2) Sonu Singh

(57) Abstract:
A system used for offshore seismic acquisition, by using a drone (remotely operated vehicle) which can minimize the noise obtained to the minimal level. An arrangement is designed through which the reflected acoustic waves will be identified through the hydrophones set on the seabed and will be towed with the drone, which is used to negated the noise generated. This system is used prevent from imparting high frequency acoustic waves by the conventional seismic acquisition method into the formation which might cause harm to the survival of the aquatic life and achieving better seismic sections devoid any noise generated due to bubbling effected initiated by the sea.

No. of Pages: 15 No. of Claims: 7
Title of the invention: A VEHICLE CONTROLLER FOR WASTE COLLECTION WITH GEO MAPPING

Abstract:
A system for designing and developing a vehicle controller for geo mapping the location of the bins and also monitoring the garbage bins vehicle controller prevent overflow of the waste. An intelligent bin is developed which will alert the vehicle, to collect the waste from the bin. Offline geo mapping is embedded in vehicle for reaching the destination of the bins. The monitoring and controlling of the intelligent garbage bins and autonomous vehicle is controlled through cloud server and the amount of garbage generated in the bin at any location.

No. of Pages: 19 No. of Claims: 9
Title of the invention: A DEVICE TO MONITOR BEHAVIOURAL ACTIVITY AND EMOTION DETECTION THROUGH AI ASSISTED DASHCAM

| (51) International classification | :B60R11/00 |
| (31) Priority Document No | :NA |
| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
| (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 |

Name of Applicant:
1) Lovely professional University
   Address of Applicant: Lovely Professional University Delhi Jalandhar GT road Phagwara Punjab India

Name of Inventor:
1) Mahesh Kumar Prajapat
2) Lovi Raj Gupta
3) Rajesh Singh
4) Anita Gehlot
5) Paramveer Kang

Abstract:
A device designed to monitor the behavioral activity of the driver through AI assisted dashcam. The device is processed to capture the images or record video of the driver while driving the vehicle. The behavioral activity data of the driver is sent to the cloud with Artificial Intelligence system, where the AI system will assist the driver and monitor through the camera. The driver can interact or seek guidance through the camera if lost. This low cost device is easy to operate and keeps the driver feel safe throughout the journey.

No. of Pages: 11
No. of Claims: 9
Title of the invention: A SYSTEM FOR DETECTION AND MITIGATION OF SECURITY ATTACKS IN HIGH AVAILABILITY SIP-BASED COMMUNICATION

Abstract:
Disclosed in the present invention is a multistage intelligent security attack detection system is proposed for heterogeneous SIP-based communication networks. A first stage is a screening subsystem that selects suspicious packets either by sample-based identification or by scanning the whole traffic. The second stage is a detection and mitigation subsystem that identifies the type of attack and selects an automated mitigation policy. It further includes a third fold for load prediction which predicts the upcoming packet load using the current packet arrival trend and the model generates information about how the traffic will vary in near future enabling the service provider to scale their cloud-based system. The disclosed invention is scalable and has high availability as opposed to the prior art solutions (Figure 1).

No. of Pages: 17 No. of Claims: 12
The present invention provides compositions of drug loaded, biodegradable nanofibers that contain an antibiotic agent (drug) compound and methods of manufacture thereof. Compositions of nanofibers containing Ciprofloxacin hydrochloride (an antibiotic agent) with Polyvinyl alcohol (PVA) and Poly (meth) methacrylate (PMMA) polymers dissolved in acetic acid and formic acid are provided. The composition provided offer the ability to manufacture nanofibers. The composition has the ability to attain burst drug release in the initial hour and controlled release for the next 504 hours thereafter. The nanofibers compositions are effective against microbes and are useful for the inhibition of biofilm formation.
Title of the invention: SYSTEM AND METHOD FOR MONITORING SANITATION STATUS OF TOILET

Abstract:
The present disclosure relates to a monitoring system for cleanliness of a toilet, the monitoring system includes an image sensor configured to capture one or more images of a toilet seat, a processor to execute a cleaning status analysis engine to analyse the captured images to determine the sanitation status, and a transceiver to transmit, through an ad hoc network, the real-time sanitation status to one or more computing devices.

No. of Pages: 26 No. of Claims: 10
The present invention discloses a smart garbage bin. The smart garbage bin is attached with an insect zapper. The motion sensor in the bin senses the presence of critter and send signals to the critter distracting elements to flashlight and to spray smelly compounds.
The present invention discloses a fortified dietary formulation. The said formulation is rich in iron. The process of preparation of the formulation is simple and cost effective. The said formulation comprises of micro-encapsulated extract of spinach and milk protein.

No. of Pages : 15 No. of Claims : 8
The present invention discloses a novel formulation of bexarotene for effective treatment of cutaneous T-Cell lymphoma. The formulation is a topical gel. The topical gel of the formulation consists of either drug loaded liposomes or niosomes.
The present invention discloses a novel handy system for uniform dispense of granular fertilizer to surface. The system is easy to operate and maintain and cost-effective. The system is able to dispenses granular fertilizer in broader area of agriculture land.
Title of the invention: A NOVEL DEVICE TO CONTROL AND MONITOR THE DRILL BIT IN THE DRILLING MACHINE

Abstract:
A compact and portable device to control and monitor the drill bit in the drilling machine using IoT cloud server. The device can be installed on a job drill bit drilling machine to monitor or control automatically. The device can be monitored in real time and provides complete automation of multiple drilling processes with fixed drilling depth. The device is capable to control coolant flow rate and drilling machine rpm using IoT technology with human interference by disturbing the operation in the machine.

No. of Pages: 12
No. of Claims: 9
Title of the invention : AN APPARATUS FOR FULLY AUTOMATED ELECTRICITY BILLING AND CONSUMPTION NOTIFICATION

Abstract :
Disclosed is an apparatus for fully automated billing and consumption notification. The present invention uses IoT platform for real-time energy consumption reading and sends notification to users registered email. There is no manual operation requires to get the information related electricity consumption.

No. of Pages : 10 No. of Claims : 5
Smart Comb, an electronic comb which is designed to monitor the quality of the human hair by detecting the moisture, oily nature and roughness of the hair. The data detected is displayed on a LCD screen for the user to observe the quality of their hair. The smart is easy to use and battery operated.

No. of Pages : 13  No. of Claims : 6
Abstract:

Disclosed is a remote assisted refrigerator door monitoring with IoT which detects the human presence/absence when door of refrigerator opens and sends notification to user if door is open and human absence near the fridge door. The present invention uses IoT connectivity to monitor the status of fridge door and facilitates to give command for door closing remotely. The present invention further facilitates electricity saving and enhance the overall life of device.

No. of Pages: 13
No. of Claims: 5
Title of the invention: AN AUTOMATED DEVICE TO MONITOR OVERHEAD TANK

Abstract:
A device to control and monitor the water flow in overhead water tank and the real time data obtained is sent to an IOT enabled base system. The device is used to reduce water wastage from tank overflowing. This fully automated device is easy to install and battery operated. The tank system device is sends the data to IoT cloud about the water level in tank, the base system receives the water level in tank, monitors status of the water supply form the water source and the water threshold from the tank is evaluated, based on which the actuator switch ON/OFF the pump motor through IoT technology. The invention is fully automated involving no intervention of human operation. In addition, it also alerts the used about the possible scarcity of water based on water supply timing and water level in tank.

No. of Pages: 16  No. of Claims: 10
A conventional ironing device designed to process the clothes by straightening, which is monitored and controlled automatically through IoT. An alert/notification is sent to the user to switch off the device if it exceeds the estimated ideal cut off state. The device is used to prevent from short circuit or overheating.

No. of Pages : 13 No. of Claims : 5
(54) Title of the invention: AZURE CLOUD BASED FRAMEWORK USING WEB API FOR FILES MANAGEMENT IN DIFFERENT DEVICES

(51) International classification: G06F 16/00

(31) Priority Document No: NA

(32) Priority Date: NA

(33) Name of priority country: NA

(86) International Application No: NA

(87) International Publication No: NA

(61) Patent of Addition to Application Number: NA

(62) Divisional to Application Number: NA

(71) Name of Applicant:
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   Address of Applicant: Lovely Professional University Jalandhar-Delhi G.T. Road, Phagwara, Punjab-144 411, India

(72) Name of Inventor:
1) SHARMA, Ashok
2) TEJA, Varun

(57) Abstract:
A process of developing azure cloud based framework using WEB API for remotely managing files list in different devices. In the present invention, list file is generated for every drive present in computer which contains details of all the files present in that drive and is send to server, to use it from remote location and to sync across user devices. It takes very less time to find required files and duplicate files among various disconnected devices once synchronized.

No. of Pages: 11 No. of Claims: 7
A system designed for set top boxes integrated to distributed ledger to secure the transactions with cryptography, secure transaction through block chain. The transaction is secure and authenticated through block chain where it prevents any third part to break into the system. The system is easy to install and history of the transaction is maintained for future.

No. of Pages : 18 No. of Claims : 6
Title of the invention: A DEVICE WITH IOT ENABLED SONIC BEACONS ARCHITECTURE FOR PEST CONTROL

Abstract:
A device with an IoT enabled sonic beacons architecture for pest control in the storage warehouse. The device consists of plurality of Wi-Fi enabled sonic beacon, which are connected with the log fog node by a cloud server. The cloud server sends them to a customized mobile application, through which the data can be controlled and monitored. The device is easy to install and battery operated.

No. of Pages: 13 No. of Claims: 6
The present invention relates to a herbal composition for the treatment of asthma comprising (a) Tephrosia purpura (Sarphooka), (b) Cuscuta reflexa (Aftimoon Kasoos), (c) Morinda citrifolia (Noni), (d) Terminalia arjuna (Arjun Bark), (e) Piper longum (Pipal Bari) and (f) Piper nigrum (Kali Mirch), and a process for preparing the composition. The composition is useful for the treatment of asthma.
A multilevel analog to digital converter (ADC) is composed of noise shaping filter and multi-level quantizer, where said quantizer is made from an array of comparators, each coupled with one reference level, the said quantizer is coupled with a thermometric digital to analog converters (DAC) in the feedback path, the said DAC output is compared with ADC input and error is fed to noise shaping filter, said reference levels of each quantizer is generated from a digital to analog converter coupled with a digital quantizer reference controller and said digital quantizer reference controller is randomly changing the reference levels in a way that quantizer coupled DAC elements are indirectly randomised to improve the overall linearity and noise performance of the converter. FIG 3
The present invention discloses a method of calibrating time interleaved analog to digital converter comprising: sampling a common input signal, said sampling is performed by an array of sub analog to digital converters, each generating individual digital analog equivalent outputs with sampling time errors, said digital outputs are fed to sampling time error estimation circuitry to calculate a digital output proportional to sampling time error between two consecutive channels, without any restriction on input signal or ADC channel design, said timing skew estimator circuitry composed of generating a delayed output of one of the two consecutive ADC channels, channel first and channel second and subtracting the said delayed output with digital output of the said second channel and producing the first subtracted output and output of said second channel subtracted with said first channel output delayed by sampling delay between the two consecutive channels and producing the second subtracted delayed output, absolute value of the said first subtracted output and said second subtracted delayed output is monitored for peak value of both for a fixed time duration and then subtracted values of the said peak values are the estimation of sampling time error between the said two consecutive channels, same process is repeated to each consecutive ADC channels of the said ADC array.

No. of Pages : 14  No. of Claims : 5
Rajasthan has the country's 10 per cent land mass but only 1.1 per cent surface water making it almost completely dependent on ground water which is fast depleting. What's worse only 10 per cent of wells have water that is safe for drinking and 88 percent of Rajasthan water is saline, 55 per cent has very high fluoride. Rajasthan is one of those state which facing the most scarcity of drinking water or water for irrigation purpose. The state even in condition to all time high monsoon record of 1917 when an average rainfall of 1079.00mm was as per the data available with the water resource department, Rajasthan receive an average rainfall of 743.68mm but the questions still arise that with a plenty of water, why India is on the world’s most water stressed list. Hence, this situation leads to the question that what are the ways water can be conserve in proper manner. There are so many traditional methods followed with the help of some NGO’s and government scheme for water conservation in many parts of Rajasthan specially in tribal area of southern part of state but some time due excess rainfall, the situation of flood arises and soil won’t easily consume the excess rainfall water. These are some major issues due to which water crises still remains the same for Rajasthan state. To overcome this situation, we are suggesting an intelligent method for water conservation according to the atmosphere of southern Rajasthan.

No. of Pages : 13 No. of Claims : 9
(54) Title of the invention: VEHICLE TO VEHICLE COMMUNICATION THROUGH LI-FI COMMUNICATION

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<td>Address of Applicant: Lovely Professional University</td>
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<tr>
<td></td>
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<th>(72) Name of Inventor:</th>
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<td>1) SINGH, Dushyant Kumar</td>
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<td>2) JERATH, Himani</td>
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<tr>
<td></td>
<td>3) D, Prasath Narethira</td>
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<tr>
<td></td>
<td>4) RAJA, P</td>
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(57) Abstract:
A system designed for Vehicle to Vehicle (V2V) communication using Li-Fi Technology by exchanging the information of the nearby vehicles. The transmitter (laser) and receiver (photodiode) communicate between the vehicles using Li-Fi module. The information is detected and displayed to the driver in the vehicle. Auto Braking System is implemented to prevent accidents and function on the information received from the device. The device is of low cost and easy to install which can be used to prevent accidents on road while driving.

No. of Pages: 13 No. of Claims: 7
(54) Title of the invention : A NOVEL SMART COOKER

(51) International classification

A47J27/00
A47J36/00
A21B7/00

(31) Priority Document No : NA
(32) Priority Date : NA
(33) Name of priority country : NA

(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) Lovely Professional University
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2) Punjab India

(72) Name of Inventor :
1) SINGH, Dushyant Kumar
2) RAJA, P.
3) AMJED, Rida

(57) Abstract :
A smart cooker which is the assembly of two chambers, wherein one chamber is used as a basal chamber operating as a normal electronic cooker and another chamber as a strong container for the ingredients that are to be put into the cooking food at certain intervals of time. The top chamber includes required quantity of storage components for different ingredients. The basal chamber has a stirrer for stirring timely. The system is controlled by a microcontroller which collects the information about temperature and control the relay module and stepper motor to provide the spin for getting ingredients.

No. of Pages : 15 No. of Claims : 8
(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/11/2019
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(31) Priority Document No :NA
(32) Priority Date :NA
(33) Name of priority country :NA
(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

(54) Title of the invention : SENSOR BASED CONTROLLING DEVICE FOR OPEN CHANNEL IRRIGATION SYSTEM

(51) International classification : A01G 25/00, F02M 26/00
(71) Name of Applicant :
1) Lovely Professional University
Address of Applicant : Lovely Professional University Jalandhar-Delhi G.T. Road, Phagwara, Punjab-144 411, India

(57) Abstract :
Disclosed is a device based on sensor for controlling open channel irrigation system. The present invention uses water sensor to sense the water level and real-time information available through IoT and cut off the power supply of motor automatically when sufficient water is supplied to the agriculture field. The present invention further facilitates low maintenance of device and highly effective as no complex mechanism/installation is required.

No. of Pages : 10 No. of Claims : 6
A shampoo bottle for full utilization of shampoo liquid with detachable tray consisting of a slider (3) to be attached at the bottom of the bottle surface, a movable plastic tray (2) attached with the slider (3), a push/pull handle (4). The lower part of the bottle can be detached as it is in the form of a movable tray (2) and after using the remaining shampoo at the end of the bottle, can be again attached on the slider and pushed inside. The present invention involves zero effort of pressing the bottle again and again for taking the shampoo out of the bottle remaining at the end of the bottle.

No. of Pages : 14 No. of Claims : 6
**Title of the invention:** A NOVEL SYSTEM TO INTEGRATE AND IMPLEMENT GREEN LEAN SIX SIGMA FOR SUSTAINABILITY

**International classification:**
- G06Q 10/00
- C01B 3/00
- H02H 9/00

**Priority Document No:** NA

**Priority Date:** NA

**Name of priority country:** NA

**International Application No:** NA

**Filing Date:** NA

**International Publication No:** NA

**Filing Date:** NA

**Patent of Addition to Application Number:** NA

**Filing Date:** NA

**Divisional to Application Number:** NA

**Filing Date:** NA

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3. Mahender Singh Kaswan
4. Dr. Chander Prakash

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**Name of Inventor:**
1. Lovely Professional University
2. Rajeev Rathi
3. Mahender Singh Kaswan
4. Dr. Chander Prakash

**Abstract:**
The novel system to make the integration of the individual Green, Lean and Six Sigma and implementation of comprehensive GLS approach for the sustainable development of the industrial organizations. The present invention facilitates the industrial organizations to integrate their operations with GLS approach thus helping in the mitigation of industrial wastes and carbon footprint, assessment of the current level of various emissions, capability of the system as well as process.

No. of Pages: 17  No. of Claims: 5
Title of the invention: A NOVEL ALERT SYSTEM FOR GAMES

Abstract:
An alert system is designed for a chess game where buzzers make sound in case a player makes an illegal move in the chess game. The system consists of a chess board, location barcodes (100), piece barcodes (101), reader, controller, two buzzers, two counters and Li-ion battery. In the system, barcodes are placed on both the top of the chess and bottom of each piece and separate addresses for each barcode is allocated. Then reader records the addresses for each piece location in the starting and whenever the piece changes the location the controller checks the new location of the piece with predefined algorithm. The counter provides the information of how many illegal moves a player has made. The system makes it easy for appointed invigilator to keep track of the illegal moves in the game.

No. of Pages: 15 No. of Claims: 7
A fully automatic biomechanical actuator, designed to control the movement of the motored wheelchair by synchronizing with the muscle movement of the person seated on the wheelchair. The device works on EMG (Electromyography) sensor to produce wheelchair movement automatically without any external support.

No. of Pages: 12  No. of Claims: 7
A novel system of cleaning ceiling fan consisting of a there is a mechanism having an enclosed cleaner box chamber containing the sponge on around the periphery of the hollow box. The system consist of blades/wings (1), links (2), fan housing (3), Rod (4), Cleaner box (5), Sponge (6), Clamps (7), Slider (8). In the system, three different links are further connected with the cleaner box with the help of universal joint and further connected to the rod. Once the reciprocating motion is given to the rod, cleaner (5) connected to the blades slides horizontally and clean the blades (1). This invention is used for a fan mounted on different heights.

No. of Pages : 15  No. of Claims : 6
**Title of the invention :** A NOVEL SYSTEM FOR BIKE SIDE STAND

**International classification :** B62H 1/00, B62H 3/00, B60Q 9/00

**Name of Applicant :**
1. Lovely Professional University
   - Address: Lovely Professional University
   - Jalandhar-Delhi G.T. Road, Phagwara, Punjab-144 411, India

**Name of Inventor :**
1. JAIN, Mohit
2. BAHL, Ankur
3. SAHDEV, S.K
4. SINGH, Satnam

**Abstract :**
A system of making bike stand automatic is designed which will automatically slide the side stand back in position when users switch on/off the ignition of the bike. The system consists of a battery, a DC motor (1), an ignition switch (2), a micro controller, a side stand (5), limit switches, and stoppers (3). In the system, the side stand (5) is picked up when bike ignition is turned on, and it will be engaged for parking with ground when ignition gets off. The system provides fool proof parking to the bike and prevents the accidents.

No. of Pages : 13
No. of Claims : 6
Title of the invention: AN AUTOMATIC SYSTEM FOR SOLAR PANEL WASHING AND CLEANING

Abstract:
Disclosed is a system for an automatic washing and cleaning of solar panel which consists of a water source, a solenoid valve which controls sprinklers attached to water source, a threaded shaft, a bevel gears, a solar panel, a moving shaft, a wiper, and a limit switch. The present invention provides a cost-effective solution to wash and clean the solar panel automatically as well the system is easy to install with new solar panel or with existing solar panel. The present invention further facilitates the washing and cleaning after every third day despite of any detection of dirt as well as this time duration increases or decreases as per requirement.

No. of Pages: 13 No. of Claims: 6
An electronic device includes a processor capable of executing a first calculation, wherein the processor is configured to: in a first case where activating processing with initialization processing of the electronic device is conducted for the first time after factory inspection processing of the electronic device, set a numerical value to be used for the first calculation to a first numerical value during the activating processing with the initialization processing of the electronic device; and in a second case where the activating processing with the initialization processing of the electronic device is conducted for a second and subsequent times after the factory inspection processing, set the numerical value used for the first calculation to a second numerical value different from the first numerical value during the activating processing with the initialization processing of the electronic device.
Title of the invention: A SYSTEM AND PROCESS FOR ENABLING REAL-TIME AND/OR SIMULTANEOUS SHOWCASING OF MEDIA BETWEEN A PLURALITY OF DEVICES

Abstract:
ABSTRACT TITLE: METHOD AND SYSTEM FOR SHOWCASING OF MEDIA BETWEEN A PLURALITY OF ELECTRONIC DEVICES
The present disclosure relates to a method and system (100) for enabling showcasing of at least one media, optionally accompanied by facilitating interaction, between a plurality of electronic devices in communicable connection with at least one computer network (16). In accordance with the present disclosure, the showcasing of the media is facilitated without the media being actively downloaded on said electronic device(s) (10). Depending on the location of the media, at least one system-based server engine (14) and optionally, a media-based server engine (18) facilitate the afore-stated method.
The present invention provides method to prevent the literal material including currency, government documents, important documents and products/items from imitation/duplication/replication. The producer of product or printed material will provide customized verification codes with product/printed material. To verify the genuineness, these codes shall be sent to the producer using means of communication provided by the producer. The producer will check their database of verification code and verify the genuineness of particular item. The producer will share the result to user whether the verification code is genuine, suspicious or counterfeit. The product will go through the chain of middle users before it reaches to the end user. By using verification codes provided by the producer, any concern person can verify the genuineness of particular product/printed material.

No. of Pages: 40  No. of Claims: 35
The present invention describes an integrated touch display panel and a manufacturing method thereof. The integrated touch display panel comprises a gate drive circuit positioned at the edges of two opposite sides of a first substrate, multiple scanning lines are alternately connected to the gate drive circuit positioned at the edges of two sides, and each scanning line is connected with one of the shift register units. There exists at least one scanning line, and pull up/pull down characteristics of a pull up transistor/pull down transistor of the shift register unit connected with the at least one scanning line are different from pull up/pull down characteristics of a pull up transistor/pull down transistor of the shift register unit connected with a scanning line adjacent to the at least one scanning line. [Fig.2]
Title of the invention: ELECTRIC POWER GENERATOR

(51) International classification:
G08C000170200000,
H01M000413400000,
H01M000800800000,
H01M001048000000,
H02J000700000000

(31) Priority Document No: NA
(32) Priority Date: NA
(33) Name of priority country: NA
(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

(57) Abstract:
1. Battery or device which acts or works as battery
2. Power controller & battery charger
3. Rotating device
4. Power generator

No. of Pages: 5 No. of Claims: 1

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(72) Name of Inventor:
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**Title of the invention:** Medicinal herbal composition and its use for treatment of heart diseases and hypertension.

**Priority Document No:** NA

**Name of Applicant:**
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Address: 140, Utkarsha, 10/11, Sukha Sagar Nagar Katraj, Pune, PIN: 411046, Maharashtra India

**Name of Inventor:**
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**Abstract:**
Medicinal herbal composition and its use for treatment of heart diseases and hypertension. Abstract The present invention relates to medicinal herbal composition for treatment of heart diseases. More particularly the present invention relates to herbal composition comprising Arjuna Terminalia as the main ingredient and mixture of other ingredients which is simple and easy-to-adopt treatment of the heart diseases without any hindrances to daily work life.

**No. of Pages:** 18  
**No. of Claims:** 10
### Title of the invention: ARRAY SUBSTRATE AND DISPLAY PANEL

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<td>2) Sera Kenji</td>
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An array substrate includes a flexible substrate (10), a thin film transistor (20), a first metal layer (30), a second metal layer (40) and a stacked structure (70) including multiple inorganic layers. The thin film transistor (20) includes the source (s), the drain (d), the channel and the gate (g) insulated from the source (s), the channel and the drain (d). The inorganic layers include one or more buffer layers (71) between the flexible substrate (10) and the thin film transistor (20), one or more gate insulating layers (72) between a channel area and the gate (g), and a first isolating layer (73) between the thin film transistor (20) and the second metal layer (40). At least one of the inorganic layers has multiple openings (80) at a position corresponding to a display area (60).

No. of Pages : 38 No. of Claims : 17
ABSTRACT A MONITORING SYSTEM FOR PRESSSURE COOKING VESSEL AND MONITORING METHOD

Disclosed is a monitoring system and method for a pressure cooking vessel that has a pressure control valve. The monitoring system includes an input device to receive a first number of operation of the pressure control valve, an audio feedback device to track a second number of operations of the pressure control valve and generate a first electrical signal pertaining to each second number of operations, and a processor coupled to the input device and the audio feedback device to receive the first number of operations and the first electrical signal therefrom. The processor receives the first electrical signal and updates a count of the second number of operations, and compares the updated count of second number of operations with the first number of operation. Further, a communicator module generates an alert when the first number of operation is equal to the updated count of second number of operation. Fig. 1
Title of the invention: A DESIGN OF A HYBRID POWERTRAIN WITH PARALLEL CONFIGURATION FOR TRANSMISSION

Abstract:
The invention is about the hybrid powertrain consists of two power sources in a two wheeler vehicle by using parallel combination of electric motor and IC engine. The intermediate shaft which is bolted to the frame of the two wheeler consists of two freewheels which can rotate in either direction and one rigid sprocket. The two free wheels are separately driven by motor and IC engine. The free wheel transmits power in one direction as it has ratchet and pawl mechanisms, in other direction it rotates freely without power transmission. The inventive mechanism of the powertrain helps to initially travel in the two wheeler using motor and when the batteries are out of power the vehicle can be operate on petrol mode making it a pure hybrid vehicle. With the use of hybrid powertrain, the overall range of vehicle is improved and it creates less pollution in comparision to any pure petrol based two wheeler vehicle.
**Title of the invention:** HYBRID CONCRETE USING HYDRATED LIME SLUDGE AND BAGASSE ASH

**Abstract:**
ABSTRACT In the proposed invention, a hybrid concrete is developed by partial replacement of cement and silica from conventional concrete with the waste materials, hydrated lime sludge obtained from fertilizer industry and bagasse ash obtained from sugar industry respectively. These waste materials are added in the concrete along with conventional constituents cement, sand, aggregates and water. After several tests on hybrid concrete, it is found that use of these waste materials improves compressive strength, acid resistance of concrete and binding properties of the concrete without heating behavior of molecular structure of the concrete material. At the same time, it helps to control the excess mining of environmental resources such as river sand and lime stones and provides solution for dumping of waste materials which help to reduce adverse effects on environment and human health along with reduction in overall cost of concrete preparation.

No. of Pages : 15 No. of Claims : 7
Abstract:
Empirical formula for determination of tension and compression steel in flexural member ANUJ GUPTA, Dr. P.D. PACHPOR

Abstract - In the designing of Reinforced Cement Concrete member, the percentage of Steel plays a vital role, as it exceeds can cause brittle failure and make the structure uneconomical while its ratio less than required will lead to snapping of bar resulting in even collapse of structure. It depends on various conditions like grade of concrete, steel and dimensions of the member. There are various formulae by which we can find tension and compression steel in single reinforced as well as doubly reinforced beam. For this purpose either lengthy calculation for each beam are carried out or adopt and use table from SP-16, which directly gives Pt (percentage of steel in tension) and Pc (percentage of steel in compression) in terms of cross sectional area. The use of SP-16 tables are cumbersome and sometimes manual error is possible while reading graphs and tables. In our research work, we have developed empirical relations by which tension and compression steel can be calculated directly from bending moments and cross section of beam (Mu/bd2). The use of such formula is easy and the results obtained are within acceptable limits and fairly accurate. The formula is validated by solving various examples and acceptable.

No. of Pages: 7 No. of Claims: 3
Title of the invention: DEEP POROSITY-GRADIENT AND VARYING PITCH FILTER CARTRIDGES

Abstract:
A filter cartridge with enhanced dirt holding capacity, longer filtration service and good performance for a filtration system is disclosed. The disclosed filter cartridge comprises a perforated core; and a plurality of filter media layers arranged around the core. The plurality of filter media layers include a multifilament yarn that is wound around the core such that pitch of the yarn is continually varied across the entire thickness of the plurality of filter media layers and the pitch is also gradually increased from an inner layer that is wound near the core to an outer of the plurality of filter media layers. The plurality of filter layers are arranged such that a deep porosity gradient towards the centre of core is achieved to capture a wide range of particles sized contaminants within the filter media layers.

No. of Pages : 19 No. of Claims : 8
A TWO-PHASE LATCHING RELAY

A two-phase latching relay is provided. The two-phase latching relay includes a relay body. The relay body includes two control loops. Further, each of the two control loops includes a first spring seat and a second spring seat. The relay body also includes a magnetic subsystem located at a centre of the relay body, and configured to control each of the two control loops simultaneously. The relay body also includes at least two input terminals and at least two output terminals operatively coupled to the two control loops. Further, the at least two input terminals and the at least two output terminals are located on at least one side of the magnetic subsystem. Further, the placement of the magnetic subsystem in the centre of the relay body avoids the dissipation of heat while the two-phase latching relay is being operated. FIG. 1

No. of Pages : 14 No. of Claims : 8
Title of the invention: SINGLE STEP PROCESS FOR CONTINUOUS PRODUCTION OF HIGH PURITY CARBON NANOTUBE WOOL HAVING TUNABLE SEMICONDUCTING OR METALLIC CHARACTERISTICS

Abstract:
A process for continuous production of carbon nanotube wool having metallic or semiconducting characteristic comprising mixing a carbon source, catalyst precursor and a growth promoter in a ratio, subjecting the mixture to a step of sonication for 10-20 minutes, preheating the said mixture at 150-200°C to vapourize it, the said vapour is introduced into the synthesis zone with the help of Argon and hydrogen gas to produce CNT sock, collecting the CNT sock over a rotating rod by spinning it at constant speed to produce wool. Fig. 1

No. of Pages: 23 No. of Claims: 7
Title of the invention: SA PRODUCTION FOR INCREASING IMMUNE POWER AGAINST HIV

Abstract:
Take the required amount of water, aloe vera, mahua flower and pour into the soil made pot. The pot placed in soil for fermentation for a period of one month. After the process of fermentation of the said solvent, then solvent is transferred into 100 ml of into another soil pot. Then theses transferred solvent pot is put over the silent the heat and pot is closed with the help of banana leaves, then bamboo hollow stick was inserted in the pot through banana leaves and again closed airtight with the use of soil mud. The heat was give up to the temperature of 70 to 75 ºC. During this process we collect the distilled solvent through the bamboo sticks in the glass bottle and the bottle is stored at 0 to 5 ºC temperature and its ready for the use as a medicine.
Title of the invention: PROCESS FOR PREPARATION OF INSTANT BEER

Abstract:
ABSTRACT Process for preparation of instant Beer A process for concentration of aqueous solutions from natural ingredients which contain volatile aromatic and non-volatile components with longer shelf life from single master concentrate. The beer concentrate so obtained can be encapsulated in edible polymer capsules of various size and shape to be reconstituted in fresh beer anytime anywhere.

No. of Pages: 16 No. of Claims: 8
In an embodiment, a system for detecting drowsiness in drivers is disclosed. The system comprises an image capturing device configured to capture a video associated with a driver of a vehicle. The system further comprises an audio device. Furthermore, the system comprises a controller coupled to the image capturing device and the audio device. The controller is configured to extract a plurality of Region of Interests (ROIs) from the video using a machine learning technique, where each ROI in the plurality of ROIs corresponds to the eyes of the driver. Furthermore, the controller is configured to determine an aspect ratio associated with the eyes of the driver based on the plurality of ROIs. Furthermore, the controller is configured to trigger an audio alert notification through the audio device when the aspect ratio is below a predefined threshold for a predetermined duration.

No. of Pages : 14 No. of Claims : 14
The present invention discloses a trawling system consisting of plurality of trawl ropes (3 and 5) which connect a trawl net (12) to the trawler (1), wherein the trawl rope is provided with plurality of visible markings (13) for identifying rope elongation and a method for preventing skewing of the trawl net (12).

No. of Pages : 17  No. of Claims : 5
The present invention discloses relates to low-cost solar water heater to function during sun-off period using phase change material. The objective of the present invention to provide overcomes the inadequacies of the prior art in using of phase change material in solar heater. The solar water heater capable to function during sun-off Period, the solar water heater comprises a flat plate collector assembly, a heat exchanger plate and a connecting assembly. The Flat plate collector Assembly comprises a heat exchanger plate, a heat collecting metal plate, a tubular heat exchanger, a plurality of metal pipe and an insulation iron box. The plurality of Metal pipe is used to cover the tubular heat exchanger & filled with a Phase changing material. The phase changing material is used to store latent heat during sunshine and release after sun off period.
The present invention relates to footwear. It is the object of the present invention to provide footwear, having structure and layout so that different types of uppers (shape and size) can be fitted onto a common foundation, based upon the choice and taste of the user. Thus, the aim and object of the present invention is to keep in mind the satisfaction of the consumer, that is to say, that when a consumer decides to have a different upper(s), or an upper(s) with a different style, the same can be done by the consumer by simply attaching or detaching the upper and appending such uppers to the common foundation. In the present invention, the footwear is designed in a manner that there exists, an upper (which can be changed as per the choice of the consumer) and said the upper, having on it placed points of attachment, a midsole and an outsole. The upper is coupled to the midsole at a minimum of 2 hook-up points or in a manner such that the upper draws itself along the circumference of the outer potion of the mid sole. Importantly the upper has on its body, points of attachment either in the form of snaps, push buttons or velcrow, which then in turn act as point of attachment for uppers which the consumer can choose as per convenience. The principal object of the present invention is to have with the footwear, interchangeable uppers, the advantage of such a footwear being, it not only helps the wearer choose the colour and appearance of the footwear to compliment the apparel worn, but enables the wearer and have significant reduction in expense by having one footwear with numerous interchangeable uppers taking the place of several different types of footwear. Thus the object of the present invention is to provide a footwear comprising of a sole and interchangeable upper part having on it push buttons, buckles to enable fastening of new uppers with a decorative member.

No. of Pages : 15 No. of Claims : 7
| (51) International classification | :D06P1/00 |
| (31) Priority Document No | :NA |
| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
| (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 |

**Title of the invention:** A SYSTEM AND METHOD FOR TREATMENT OF TEXTILE WASTE-WATER

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**Name of Inventor:**
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2) Dr. Dipika Kaur Jaspal
3) Dr. Amit Kumar Tiwari

**Abstract:**
The present disclosure relates to a system (100) and method (200) for treatment of a textile wastewater effluent by decolorization and removal of textile dyes. The decolorization and removal of textile dyes is achieved by adsorbing the textile dyes over a surface modified weed bio-sorbent unit (103). The biosorbent unit (103) comprising a surface modified natural biosorbent (300) having at least one of a water hyacinth (echornia crassapies) and a congress grass (parthenium hysterophorus) as an adsorbent. The system (100) and method (200) of treatment of textile wastewater effluent further comprises a coarse (101) and fine filtration units (102, 106, 109), an aeration unit (104), solar assisted electrolytic precipitation unit (105), a germicidal treatment unit (107) and a pH neutralization unit (108). The disclosed system, method and adsorbent is simple, cost effective, efficient and energy efficient. (To be published with Figure 1)

No. of Pages : 38 No. of Claims : 16
Disclosed is an ecofriendly cleaning agent for fabric and process thereof using crustacean shells by simple processing and drying using Hydrochloric Acid and Sodium Hydroxide treatment. This method helps separating chitin from other impurities by demineralization by treatment with HCL and deproteinization by treatment with NAOH. The Chitin nano particles obtained by present process are synthesized using different concentrations of Hydrochloric Acid at 90.

No. of Pages: 36 No. of Claims: 8
The present disclosure of the invention related to computer implemented method for anti-screenshot virtual keyboard. The developed tool enables a user to Log such Keyboards using a simple Dual Screenshot algorithm. The working of the tool can be used by Security Analysts to develop a more secure Anti Screenshot Virtual Keyboard.

No. of Pages : 22 No. of Claims : 3
A method for manufacturing a mesh prosthesis (100) is disclosed. The method includes solvent casting of a polymeric solution in a substrate, primary annealing of the substrate to form a film layer (3). The film layer (3) is placed in close contact with a mesh layer (1) and is then compressed with the said layer to form a mesh prosthesis (100). The said prosthesis is subjected to secondary annealing ensuring complete and uniform attachment of the film layer (3) with the mesh layer (1). The annealed mesh prosthesis (100) is incubated with alcohol to eliminate excessive moisture. The said prosthesis is subjected to formation of drainage holes (9) in the mesh layer (1). The said prosthesis is then subjected to formation of an indicator (7) on a centre portion of the film layer (3) in the form of an alphabet. The said prosthesis is then subjected to packaging and sterilization.
# Internet of Things Sensors Based System for Customer Behavior Analysis Using Neural Network

**Abstract:**

The present invention is related to an internet of things based system for customer behavior analysis using neural network. The system comprises IoT sensor module, a neural network module, a processing unit and a data storage unit. The plurality of internet of thing sensors is placed at a shopping area to identify a customer behavior with integrating it to the purchase data and past purchasing behavior of the customer. A neural network module, with processing of the data through the processing unit of the system, estimates the possibility of shopping behavior of the customer.

No. of Pages: 18  No. of Claims: 8
The present disclosure of the invention related to a spark distributor for multi fuel single-cylinder internal combustion engine. The present disclosure present sparks distributor assembly that can be suitable to fit with single cylinder engine with vertical slider to create spark. The objective of the present invention is resolves the in-adequate of the prior arts in design of spark distributor for multi fuel single-cylinder internal combustion engine.

No. of Pages : 17 No. of Claims : 5
A magnetic hybrid locking mechanism. The magnetic hybrid locking mechanism 100, includes a first member 102, a second member 104 disposed within the first member 102, the second member 104 defines a keyway 106, the first member 102 and the second member 104 define a plurality of locking element cavities 108, at least one magnetically actuatable locking element 110 slidably disposed within each of the locking element cavity 108 and a magnet embedded key 112 adapted to be received axially in the keyway 106. The magnet embedded key 112 is adapted to displace each of the magnetically actuatable locking element 110 from a locking position to an unlocking position by a magnetic force when the magnet embedded key 112 is inserted in the keyway 106. Thus enables rotation of the second member 104 relative to the first member 102. FIG. 1

No. of Pages : 22 No. of Claims : 13
Title of the invention: MAIZE PLANTING MACHINE

Abstract:
The present invention relates to a maize planting machine. The object is to provide a planting machine which is attachable and detachable to the tractor. Smart maize planter is assemblies of six major units which consist of chassis, soil furrows opener and soil burrower mechanism, compressor, pneumatic pick and feed system, smart fertilizer feeding system, smart control junction box etc. The planter is so designed to achieve even plantation for that a smart pick and drop system is designed. In this planter smart fertilizer feeding system avoids the blockage of fertilizer feeding pipe. Fertilizer feeding system decides and feed meter quantity of fertilizer to the seed. Following invention is described in detail with the help of Figure 1 of sheet 1 showing front view of assembly, Figure 2 of sheet 1 showing top view of assembly and Figure 3 of sheet 2 showing left hand side view of an assembly.

No. of Pages: 16 No. of Claims: 5
**Title of the invention:** DETACHABLE AUTOCLAVABLE CAP FOR TEST TUBE AND FLASK

**Abstract:**
An improved test tube and flask caps Abstract In an important aspect of the invention test tube and flask cap is provided wherein an improvement is in the form plastic cap having body of cap possessing vertical aeration slits (fig 1) along with lid closure rim, flappable lid (fig 1) is connected to the body of cap with hinge, wherein lid is provided with lid opening extension The vertical aeration slits present alongside of the cap provides better aeration than pre-existing plastic caps present in market. The vertical aeration slits ensures better aeration and also prevents the contamination.

No. of Pages: 8
No. of Claims: 5
Title of the invention: METHOD TO IMPROVE ADHESION PROPERTY OF TITANIUM NIOBIUM NITRIDE COATING ON KNEE IMPLANT

Abstract:
A method for treating (200) a surface of an implant (100), the method involves cleaning (201) the surface of an implant (100). Annealing (203) the cleaned implant (100) in a furnace at a temperature ranging from 1000°C to 1200°C in the presence of an inert gas. Descaling (205) of the annealed implant (100) using one or more descaling agents or solutions to remove debris. Surface treating the descaled implant (100) using one or more reagents. The reagent reacts with the metal particles on the surface of the implant (100) to form an oxide layer on the implant (100) and coating (211) the treated surface of the implant with a coating layer (101).

No. of Pages: 25  No. of Claims: 9
Title of the invention: SMART LID FOR FUEL TANK.

Abstract:
ABSTRACT: THE PROPOSED INVENTION OF SMART LID FOR FUEL TANK PROVIDES SOLUTION FOR USER EASY WAY TO REFILL FUEL TANK BY AUTOMATIC OPENING AND CLOSING LID OF FUEL TANK. IT WILL ALSO SOLVE PROBLEM OF LEAKAGE AND SPILL OF FUEL WHEN LID REMAINS OPEN AND USER IS UNAWARE OF THAT. IT ALSO PROVIDES SECURITY TO PROTECT UNLOCKING OF FUEL TANK WHEN OTHER THAN OWNER OF VEHICLE TRIES TO OPEN IT.

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

The present invention describes an artificial kidney for filtration of targeted substances from impure blood. The artificial kidney is made of a filter assembly of semipermeable membrane. The small molecules can pass through the semipermeable membrane while the large molecules such as the components of the blood are retained. The small molecules mainly consist of toxic molecules and these toxic molecules are collected in a chamber of electrolyte solution. The filtered pure blood is transferred back to the source.

No. of Pages : 14 No. of Claims : 10
Title of the invention: SYSTEM AND METHOD TO MANUFACTURE PAVER BLOCKS FROM WASTE PLASTIC BOTTLES.

Abstract:
SYSTEM AND METHOD TO MANUFACTURE PAVER BLOCKS FROM WASTE PLASTIC BOTTLES ABSTRACT A system and method to manufacture paver blocks from waste plastic bottles is disclosed. The system includes three modules; an electronic module, that consists of an open inlet to receive empty single plastic bottles and an electronic circuit that can convert count of bottles to coins. The system includes mechanical module which consists of a shredded plastic chamber and a mixing chamber, where cement, sand, coarse aggregate, water and shredded plastic will be mixed together to form a uniform mix of concrete. The third module consists of an outlet chamber where concrete from mixing chamber will be transferred to the paver block mould, where concrete with waste plastic will be transformed to a finished paver block. This after proper curing can be used for pavers.

No. of Pages: 12 No. of Claims: 5
System and method for producing fancy multifilament yarn by combining process of drawing & false twisting texturing process P1 and drawing process P2 in single processing system. The feed yarns optionally undergo slubbing process. Both the feed yarns are interlaced in the air jet texturing device 14 and then stabilized the interlaced yarn in stabilizing unit 16 and 17. The stabilized interlaced yarn is winded and packaged thereby producing the multifilament fancy yarn.

No. of Pages: 33  No. of Claims: 16
**Title of the invention:** AN IMPROVED PROCESS FOR THE PREPARATION REMOGLIFLOZIN ETABONATE OR PHARMACEUTICALLY ACCEPTABLE SALT SOLVATE HYDRATE THEREOF

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**Abstract:**
The present invention relates to an improved process for the preparation of Remogliflozin Remogliflozin etabonate or pharmaceutically acceptable salt solvate hydrate thereof. The present invention relates to an improved process for preparation of Remogliflozin etabonate or pharmaceutically acceptable salt solvate hydrate thereof through formation of isopropyl alcohol solvate of remogliflozin etabonate.

No. of Pages : 30 No. of Claims : 22
The invention relates to a pharmaceutical composition comprising remogliflozin or pharmaceutically acceptable salt or ester thereof and metformin or pharmaceutically acceptable salt thereof. In particular it relates to an immediate release pharmaceutical composition comprising: (a) remogliflozin or pharmaceutically acceptable salt or ester thereof (b) metformin or pharmaceutically acceptable salt thereof and (c) a pharmaceutically acceptable excipient.
Abstract:
The invention relates to an immediate release pharmaceutical composition comprising remogliflozin or pharmaceutically acceptable salt or ester thereof and a pharmaceutically acceptable excipient. In particular it relates to an immediate release pharmaceutical composition comprising: (A) an intra granular portion comprising remogliflozin or pharmaceutically acceptable salt or ester thereof and (B) an extra granular portion comprising a pharmaceutically acceptable excipient wherein the composition provides a plasma concentration (Cmax) of remogliflozin or pharmaceutically acceptable salt or ester thereof between about 300ng/ml to about 1400ng/ml or the composition provides an AUC of remogliflozin or pharmaceutically acceptable salt or ester thereof between about 700ng.hr/ml to about 6000ng.hr/ml.

No. of Pages: 44
No. of Claims: 27
The invention relates to a water dispersible granular composition comprising of 0.1% to 70% by weight of manganese salts complexes derivatives or mixtures thereof 1% to 90% by weight of elemental sulphur and 1% to 30% by weight of dispersing agent with granules in a size range of 0.1 2.5 mm and comprising particles in the range of 0.1 20 microns. The invention further relates to liquid suspension composition comprising 0.1% to 55% by weight of manganese salts complexes derivatives or mixtures thereof 1% to 60% by weight of elemental sulphur at least one structuring agent and at least one surfactant where the composition has particle size range of 0.1 20 microns. The invention further relates to a process of preparing the crop nutrition and fortification composition and to a method of treating the plants seeds crops plant propagation material locus parts thereof or the soil with the composition.

No. of Pages : 82 No. of Claims : 29
Title of the invention: NOVEL CROP NUTRITION AND FORTIFICATION COMPOSITION

Abstract:
The invention relates to a water dispersible granular composition comprising of 0.1% to 70% by weight of boron salts complexes derivatives or mixtures thereof 1% to 90% by weight of elemental sulphur and 1% to 30% by weight of dispersing agent with granules in a size range of 0.1 to 2.5 mm and particles in the range of 0.1 to 20 microns. The invention further relates to liquid suspension composition comprising 0.1% to 55% by weight of boron salts complexes derivatives or mixtures thereof 1% to 65% by weight of elemental sulphur at least one structuring agent and at least one surfactant where the composition has particle size range of 0.1 to 20 microns. The invention further relates to a process of preparing the crop nutrition and fortification composition and to a method of treating the plants seeds crops plant propagation material locus parts thereof or the soil with the composition.

No. of Pages: 82
No. of Claims: 27
**Title of the invention:** NOVEL CROP NUTRITION AND FORTIFICATION COMPOSITION

**Abstract:**
The invention relates to a water dispersible granular composition comprising 1% to 70% of one or more of iron salts complexes derivatives mixtures thereof 1% to 90% of elemental sulphur and 1 30% of at least one dispersing agent; wherein the granules are in the size range of 0.1 2.5 mm and comprises particles in the size range of 0.1 20 microns. The invention further relates to a liquid suspension composition comprising 1% to 55% of at least one or more of iron salts complexes derivatives mixtures thereof and 1% to 60% elemental sulphur 0.01 5% of at least one structuring agent and at least one agrochemically acceptable excipient; wherein the composition comprises particles in the size range of 0.1 20 microns. The invention further relates to a process of preparing the composition and to a method of treating the plants seeds crops plant propagation material locus parts thereof or the soil with the composition.

No. of Pages : 79 No. of Claims : 25
METHOD AND SYSTEM FOR RECORDING VITAL HEALTH PARAMETERS OF A PATIENT

ABSTRACT

The various embodiments of the present invention provide a method and system for recording basic vital health parameters and creating an electronic health record for a user. The system for recording basic vital health parameter for the user comprises mainly a multi-function chair where the user is made to sit, a first smart card assigned to a paramedical staff to authenticate him/her, while assisting the user, a second smart card assigned to the user to authenticate user and also for storing recorded basic vital parameters in the said second smart card, a multi-function center console and a cloud server hosted at a remote location. The said system records user selected vital heath parameters and creates an Electronic Health record (EHR) based on the recorded vital parameters for each user, along with other parameters such as but not limited to time stamp and user credentials. Further, the said EHR is also stored on the cloud, for allowing the user to access their respective EHR at any given time. Dated this 28th day of May, 2019 FOR PIKAR HEALTHTECH PRIVATE LIMITED BY THEIR AGENT (DR. BABITHA THARAPPAN) IN/PA-1614 ATV-LEGAL

No. of Pages : 45 No. of Claims : 14
Title of the invention: PROCESS FOR THE PREPARATION OF PONEERU USED IN THE SIDDHA MEDICINE AND THEREOF

Abstract:
The present invention describes a facile, simple, efficient process for extracting Poneeru by a simple leaching process using water medium. Processing of the soil in different leaching agents led to different salt assemblages and in the described process the leached salt is characterized as Trona with chemical formula Na₃H(CO₃)₂H₂O, of non-marine evaporite category. As revealed by the geological studies the percentage of fine sand is directly proportional to percentage yield of Poneeru. Further the characterized compound Trona was chemically synthesized and confirmed by analytical studies.

No. of Pages: 30
No. of Claims: 8
Title of the invention: AUTOMATIC SPEED CONTROL OF AUTOMOBILES USING MICRO CONTROLLED BRAKES

Abstract:
To control the violations of automobiles in the zones of schools, hospitals, and some of the crowded areas. This system has been proposed in order to control the speed in those areas automatically. It consists of a PIC microcontroller, which plays an important role in controlling the speed, besides that, a speed sensor, RF transmitter, and receiver. The existing speed controlling system controls the speed by limiting the amount of fuel to the engine. The main disadvantage of existing system is the speed can be controlled only for higher ranges. In order to attain high efficiency, it cannot be employed for high-speed range. But in this proposed system the speed can be controlled for lower range of values. The inputs from the RF transmitter and tachometer or speed sensor is compared, when the input value from the tachometer exceeds the value from the IR sensor, the microcontroller will pass the signal to the motor driver which controls the direction of rotation and speed of the wheels, so that the speed of the vehicles can be controlled. The main advantage of this proposed system is that, this can be employed in all automobiles even for solar, electric and gas type engines.

No. of Pages : 10 No. of Claims : 5
(19) INDIA

(22) Date of filing of Application : 28/11/2018

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(54) Title of the invention : ARTIFICIAL INTELLIGENT SYSTEM FOR MANAGING INFORMATION AND METHOD EMPLOYED THEREOF

| (51) International classification | G06F17/00 |
| (31) Priority Document No | NA |
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(57) Abstract :
ARTIFICIAL INTELLIGENT SYSTEM FOR MANAGING INFORMATION AND METHOD EMPLOYED THEREOF Exemplary embodiments of the present disclosure are directed towards an artificial intelligent system, comprising an end user’s computing device, a business organization’s computing device configured to allow an end-user and an organization to access an artificial intelligent information management module after providing a plurality of identity credentials, the artificial intelligent information management module configured to provide one or more software applications associated with one or more services to the end-user and the business organization. A service exchange registry comprising servers configured to interact with the artificial intelligent information management module, the servers configured to register the one or more software applications associated with one or more services to the end user’s computing device, a business organization’s computing device; and a database communicated with the artificial intelligent information management module, the database configured to store the information from the end-user’s computing device and the business organization’s computing device. Fig. 1

No. of Pages : 81 No. of Claims : 8
An intelligent and real-time cardio-pulmonary screening device (100) is disclosed. The device comprises a housing that encloses a body, said body comprising: a display unit (101); a plurality of light emitting diode (LED) indicators (102, 103); a first toggle switch (104); a second toggle switch (105); a plurality of volume controls (106, 107); a third toggle switch; an output port (109); a switch (110); a charging port (111); a temperature sensor; a transducer unit (112); and an artificial intelligence module. The artificial intelligence module analyses the sounds received in real-time and presents the results in the display unit (101), as well as in the plurality of the LED indicators (102, 103); it comprises an artificial intelligence processor that is configured to run machine learning algorithms on the device (100), with said artificial intelligence module syncing from and to the cloud when connected to internet. The disclosed device (100) is an easy to use, affordable, point of care screening device that classifies underlying cardio-pulmonary diseases within a minute. Figure to be Included is Figure 1.
# A CONTROL SYSTEM FOR A PROPELLER

**Abstract:**
ABSTRACT A SYSTEM FOR OPERATING A BLOWING-CUM-SUCTION PROPELLER Disclosed is a system (100) for operating a blowing-cum-suction propeller (112). The system (100) comprises a DC power source (110) and a control-cum-drive circuit. The control-cum-drive circuit is configured to receive power from DC power source (110) and to supply controlled voltage to a motor (104). The motor (104) is configured to rotate the blowing-cum-suction propeller (112) mounted on a motor shaft of the motor (104). A rotor position sensor (106) is configured to sense an instantaneous angular position of a rotor of the motor (104) and generate a corresponding feedback signal. The control-cum-drive circuit is configured to receive the feedback signal from the sensor (106) and to analyze the feedback signal to control the voltage supply to the motor (104) for rotating the blowing-cum-suction propeller (112) in a selected mode, i.e., either in blowing or in suction mode.

No. of Pages : 18  No. of Claims : 13
The advertising screen proposed to be placed atop of a vehicle is disclosed wherein the system comprises a LED screen 302, a processing control chip 312, a power supply unit 308, switch 324, fuse 326, car Battery 328, Wi-Fi router 310, smart Phone320 and a cloud server 318 for software processing. When the unit is ON, the required ads are displayed on the Led screen 302 considering the best of image quality, refresh rates, animations, duration, brightness and time for the led screen with the aid of process control chip 312. The smart phone 320 acts as a continuous source of internet necessary for the advertising screen guided with the help of Wi-Fi router 310. The cloud server 318 receives all the inputs values and data from smart phone 320 and process them in the cloud and sends the necessary information back to smart phone 320. The aid of internet sharing to all the passengers, accurate location sharing with use of GPS sensors and accelerometer stand as benefits. Figure related to abstract is FIG. 3

No. of Pages : 17 No. of Claims : 14
Title of the invention: VOICE BASED FUEL LEVEL INDICATOR SYSTEM

Abstract:
The voice based fuel level indicator system enables a driver of the vehicle to know the degree of fuel in the fuel tank effectively by the output of voice message. The voice output unit alarming the driver when the fuel is in held level and when the fuel is arriving at void level through sound direction it conveys the rehashed sound order three times with demonstrating through an intelligible direction on LCD show load up. The voice based fuel level indicator system outputs the alarming sign before it will be vacant to the driver before 10 km to the petroleum bunk, and henceforth enabling the vehicle driver to realize that the fuel is exhausting and to fill the fuel tank at the closest oil bunk. The voice based fuel level indicator system contains an Arduino Uno microcontroller 11 advancement stage (the foundation of the entire framework), a smaller than expected MP3 player, LCD show 10 load up, a voice loaded memory card, a little electronic stereo power enhancer unit and a speaker 13. The exceptional element of the proposed framework is that the present float sensor arrangement associated with customary fuel tanks is utilized as the information gadget without the requirement for extra sensor. There is another component of knowing the amount of fuel with an information manual push button 9 that peruses the present degree of fuel. The framework is valuable to new age individuals.

No. of Pages: 22 No. of Claims: 7
### Abstract:
ABSTRACT In accordance with one embodiment of the disclosure, a system for multilevel vertical parking is provided. The system includes one or more vertical parking frames in a parking area, wherein each of the one or more vertical parking frames includes one or more parking slots. Each of the one or more parking slots includes a first shaft, wherein the first shaft is operatively coupled to a first chain sprocket and a gear box. A second shaft is operatively coupled to the gear box and a first propeller shaft. The first propeller shaft is operatively coupled to a second chain sprocket; a third chain sprocket; a fourth chain sprocket operatively coupled to the third chain sprocket via a second propeller shaft. The system also includes a power supply unit configured to supply power to each of the one or more parking slots to vertically rotate. FIG. 1

No. of Pages: 13  No. of Claims: 10
Abstract:
A Device for Self Recognition of Veins and Insertion of Intravenous Cannula Procedure is an invention that helps nurses and doctors to find the vein easily for insertion of cannula. Detection of vein is also important to draw blood and use the sample for the purpose of diagnosis. It is a tedious task to get the perfect vein especially in babies and aged patients. Treating patients through IV is the fastest curing procedure compared to oral suspensions. Thus it is an initial procedure that has to be completed to start with the treatment. Sometimes nurses will spend hours to complete this procedure accompanied by multiple failed pricks and pain. The device will help detect veins and will also automatically insert cannula after the perfect vein has been found by the device.

No. of Pages : 16 No. of Claims : 9
The present invention discloses the architecture of biometric recognition for the smartwatch locking system, which is mainly designed to lock the smartwatch based on the user’s Photoplethysmography (PPG) signal for their biometric recognition. The present invention comprises the locking device, which includes a PPG signal recorder, intelligent biometric device, and controller. The intelligent biometric device, which is present in the locking device, consists of a template storage system and identification for verifying the PPG signal of the user with the stored database of the signal to release the lock for device access. Mainly, this intelligent biometric device is used for data access and data protection with the user’s own PPG pulse signal. [To be published with figure 1]
**Title of the invention**: IMAGE BASED AUTOMATED ESTIMATION TOOL FOR BITUMEN ROADS

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**Abstract**:  
The Image based estimate preparation for improvements to existing roads is a software tool that supports civil engineering in preparation of an detailed estimate for existing roads. The need for precise estimate is inevitable in modern world especially in providing improvements to existing roads in India, especially in tropical wet zones with heavy rainfall were the bitumen roads are affected heavily due to tropical climate. The Image based estimation preparation uses image prediction technique and depth analysis technique. The image prediction technique is to calculate the carpet area of the existing bitumen road that needs to be rectified which is considered as the abstract estimate and the depth analysis technique calculates the depth of the carpet area that is to clearly identify the places of Boulders/Soling Stone, water bound macadam-1.5 • Gravel (Single/Multilayered), wearing course and Seal coat for a detailed estimate of the bitumen road.

No. of Pages: 19 No. of Claims: 9
**Title of the invention:** DESIGN OF INTELLIGENT BRAIN HARMONY DEVICE

**Abstract:**

Brain is the major organ of our body which is responsible for all kinds of functionalities of our human body. Any changes in brain activity forms the basis for all kinds of disorders like depression, stress, anxiety, addiction, neural disorders, mental disorders, etc. The activity of brain can be analyzed using the EEG signals collected from the person in different states like rest, awake, sleep, motor actions etc. These signals would give us the state of the brain of a person which would help us to diagnose the disorders. The disorders when diagnosed can be healed by harmonizing the brain signals as per the requirement. For example, if the analysis of the brain waves specifies that the individual is in depression, then we can heal the individual by making him/her happy or by calming down his brain signals. This could be done by playing some music as well as by displaying some visual patterns. There are certain signals or waves which could harmonize the brain as per our requirement. These signals can be generated by playing some musical waves which would induce the auditory nerves and harmonize the brain. This therapy can be used for healing even unconscious person. This in turn can be tried out for a patient in coma as well. The proposal is to develop a cheaper device which would retrieve the brain signal waves from the respective points like cortical, temporal, parietal, occipital areas. The device would analyze the state of the brain and decide the emotion of the individual like stress, depression, happy, anxiety, sad, unconscious or any other disorders. Based on the outcome of the analysis, music would be played which would generate signals for harmonizing the brain waves. Also visual patterns would be displayed to change their mood based on the signal outcome. The musical patterns alone will be used if the individual is in unconscious state. When they get back their conscious, the visual patterns would support for further process. The changes would be recorded and the process will be continued till the brain is harmonized. This device can be used as a healing therapy for all kinds of mental and psychiatric disorders. The device would also have a functionality to learn the patterns and then update the musical signals generated. Once the brain is harmonized the device will be designed to automatically stop the functionality. The device would also capture the individuals fun and happy moments automatically.

No. of Pages : 7 No. of Claims : 6
Title of the invention: THERMO-COOLANT POT

Abstract:
A Thermo-Coolant Pot is a portable kettle which is an essential thing in our day-to-day life. The warm water is good for human health and it helps digestive system to work smoother. Many of us would like to drink cold water in a hot summer. In this modern era, all the traditional systems are being digitalized and become integrated systems. This motivates us to integrate the boiling as well as cooling system into our traditional water bottle model. The system named as Thermo-Coolant Pot has been built by using the rechargeable battery which is placed at the bottom corner of the pot. This invention has an advantage of generating heat energy in two ways includes thermal and solar. The temperature sensor is attached to monitor the temperature of the water to provide the users with varying temperature of water. Additionally, a timer has been attached to the pot to set a time for heating and cooling process based on the user's requirement. When the threshold (absolute) value is reached, then the boiling/cooling process will be stopped. A person is able to instantly boil/cool the water and the product set-up will be varying for different capacity of water bottle used. The future enhancement is to design a pot that uses IoT enabled solar powered medicare pot.

No. of Pages: 9 No. of Claims: 6
Title of the invention: SPIDER SILK/ARAMID FIBER REINFORCED ABS COMPOSITE MATERIAL FOR FABRICATION OF ROBOTIC FISH USING 3D TECHNOLOGY

Abstract:
The present invention is a Spider silk/Aramid fiber Reinforced ABS composite material that is used to fabricate high performance aerodynamic RF using a Fused Deposition Modeling (FDM) technique. FDM technology can be efficiently exploited for fabrication of RFs with excellent build precision and high strength to weight ratio of the fabricated structure. Spider silk/Aramid fiber Reinforced ABS composite have better strength to weight ratio and fatigue resistant while comparing them other composites of same weight basis, because the Spider silk/Aramid fiber possess a unique combination of high strength and modulus with low density high elongation and impact resistance. Hence use of Spider silk/Aramid fiber Reinforced ABS composite offer good mechanical and structural performance for 3D printed RF. Also, the weight of a RF affects its performance. Every action of weight reduction in RF has the inherent goal to extend the swimming range. The lighter the RF is, the longer it swims. Thus the composition of Spider Silk and Aramid fiber acts a best material to fabricate RF and 3D printing it using FDM.
Title of the invention: QUADRATURE PHASE SHIFT KEYING

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ABSTRACT QUADRATURE PHASE SHIFT KEYING Quadrature Phase Shift Keying (QPSK) is a form of Phase Shift Keying in which two bits are taken at a time and modulated, selecting one of four possible carrier phase shifts (0, 90, 180, or 270 degrees). QPSK allows the signal to carry twice much information than ordinary PSK, using the same bandwidth. Compared to modulation schemes that transmit one bit per symbol, QPSK is advantageous in terms of bandwidth efficiency. For example, imagine an analog baseband signal in a BPSK (binary phase shift keying) system. BPSK uses two possible phase shifts instead of four, and thus it can transmit only one bit per symbol. The baseband signal has a certain frequency, and during each symbol period, one bit can be transmitted. A QPSK system can use a baseband signal of the same frequency, yet it transmits two bits during each symbol period. Thus, its bandwidth efficiency is (ideally) higher by a factor of two. QPSK is used for satellite transmission of MPEG2 video, cable modems, videoconferencing, cellular phone systems, and other forms of digital communication over an RF carrier.

No. of Pages: 18 No. of Claims: 6
Abstract:
This model proposes a scheme for improving the performance of grid connected induction generator without changing the existing configuration. The stator winding is connected in delta at high wind speed and in star at low wind speed. In such a case the switching transients and current rating will increase high. To avoid this disadvantage and to enhance more output power, in the proposed scheme the machine stator winding permanently connected in star while the winding voltage levels are switched based on the wind speed. Rated voltage of the winding is applied during low wind speeds and a higher than the winding voltage is applied during high wind speeds. Connecting the stator winding permanently in star has the benefits of eliminating the circulating current which exists in a delta connected stator winding. Moreover, the switching transient is also significantly decreased when switching between low and high wind speeds. The proposed scheme performance is verified by simulation and developed a prototype in the laboratory.

No. of Pages : 11 No. of Claims : 5
In the proposed work, initially a site survey is to be carried out, in order to study the parameters affecting the coal flow in coal based thermal power plant. After selecting the suitable parameters, around 1000 data set are to be recorded in the operating range of the parameters. The data set replicates the entire dynamics of the process. From the collected data set learning machine (Neural Network, Support Vector Machine, Relevance Vector Machine) based models are to be developed which acts as the heart of model based controller in predicting the future control action to regulate the coal flow. Thus the proposed work focuses on coal flow regulation of thermal power plant which increases the life of the boiler tubes by avoiding boiler tube puncture which in turn avoids tripping of the power plant. Also the proposed method monitors the unit load to be constant.

No. of Pages : 8 No. of Claims : 2
The design and idea of G glass smart Manufacturing unit is to manufacture the G glass product autonomously based on the sensors and actuators. It reduces the human effort and the production time. It increases the production of G glass and employability. The objective of G glass product is to utilize the renewable energy resources and integrate the power generation and light weight storage. The smart manufacturing unit consists of two sections namely first section and second section. The components involved in First section are: Static Eliminator, Glue roll machine, Pasting roller, Thin film solar feeder, Thin polymer feeder, Control Unit and Hydraulic Cutter. The components involved in Second section are: Two Degrees of Freedom Pick and place tool, one Degree of Freedom soldering tool and both the sections are connected by rolling conveyor.

No. of Pages : 12 No. of Claims : 6
The present invention relates to a natural water filter system wherein waste water from sink and shower is fed into the collecting tank after passing through the natural eco friendly filter. The coarse impurities are filtered in the first layer (120) of gravel or coarse gravel, the smaller size solid impurities are filtered in the second layer (125) of fine pebbles or gravel, the smaller size impurities which are dissolved in water are filtered as they pass through the third layer (130) of sand which is passed through 2.36 mm standard IS sieve. The water passes through all these layers and will finally pass through the filter paper or layer of cloth. The partially filtered water is added with coagulant like Alum to remove turbidity in water and is fed into the flush tank (145) using a small motor. This water can be used for flushing thus saving nearly 1OOlcpd.
**Title of the invention : G GLASS FOR ELECTRICAL POWER GENERATION AND ELECTRICAL ENERGY STORAGE**

| (51) International classification | :C03C17/25 |
| (31) Priority Document No | :NA |
| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
| (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 |

**Abstract :**

G glass is an innovative product invented by merging both electrical power generation and electrical energy storage. G glass consists of five layers, which consists of Float glass, flexible solar thin film, thin polymer sheet, thin storage cells and thin polymer sheet. In G glass, G represents the green energy harvesting using glass. This type of glass can be used in commercial as well as residential form of individual and multi storage buildings. The significant scope of this product invention is generating and storing energy without pollution. Even the scrap of this product will not pollute the environment when compared to that of the other methodologies and products of this type.

No. of Pages : 7 No. of Claims : 5
Title of the invention: END USER PRIVACY PROTECTION SYSTEM AND METHOD THEREOF

Abstract:
ABSTRACT Title: END USER PRIVACY PROTECTION SYSTEM AND METHOD THEREOF
An end user privacy protection system and method thereof is disclosed. Said system comprises of a Hardware Processing Unit (HPU) featuring a means to set the time duration to allow the application access to mobile phone hardware components, a comparator unit to read the remaining permitted time on a counter at any given time, wherein said comparator unit activates a driver unit to activate a set of electric/electronic switches or relays to disconnect said mobile phone hardware components when the permitted time duration set by the user expires. The system also features a means to bypass the access restriction at any moment. This security method is implementable to all the computers, laptops, smart devices and wearable devices other than mobile phones irrespective of its operating system.

No. of Pages: 41  No. of Claims: 11
Title of the invention: HEAT ABSORBING PHASE CHANGE MATERIAL FOR HELMET COOLING

Abstract: The helmet is an essential safety equipment for two-wheeler riders. The primary purpose of helmet is to safeguard the head against injuries and to protect the eye from sunlight and dust particles. Rider does not feel comfortable to wear the helmet while riding the two-wheeler due to some inconveniences like sweating, hotness, etc. To reduce the inconveniences, it is proposed to provide cooling arrangement with the help of heat absorbing material in the conventional helmets. Heat absorbing material is able to absorb the heat from the wearer head and make him/her feel comfortable. Thus, it can comfort the rider and make him/her happier to wear the helmet.

No. of Pages: 17
No. of Claims: 7
Title of the invention: A PROCESS FOR SYNTHESIZING POLYCAPROLACTAM COMPOSITE

Abstract:
ABSTRACT A process for synthesizing polycaprolactam composite is provided. The process includes preheating silicon carbide below melting point of silicon carbide, wherein the melting point of silicon carbide is 1800; cooling preheated silicon carbide at an atmospheric temperature for a predefined time interval; blending cooled silicon carbide with polycaprolactam pellets; and moulding blended material into a composite predefined shape by melting the blended material up to 220 in an injection moulding machine. FIG. 1

No. of Pages: 11 No. of Claims: 6
**Title of the invention:** SYNTHESIS OF SUB-10 NM ZINC TIN PHOSPHIDE TERNARY SEMICONDUCTOR NANOPARTICLES AND CHEMICAL METHOD THEREOF

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**Abstract:**
A chemical process has been developed for the synthesis of zinc tin phosphide (ZnSnP2) nanoparticles with particle size in the range of 2 to 10 nm. The procedure involves chemical reaction of diethyl zinc and anhydrous dimethyl tin dichloride taken as zinc and tin precursors, respectively, with tris(dimethylamino)phosphine or tris(diethylamino)phosphine taken as phosphorous precursor in tri-n-octylphosphine solvent with capping ligands at temperature of 160°C for 12 hours under nitrogen atmosphere. The process can be readily extended for synthesis of other group 11-Group IV-phosphide nanoparticles by replacing the zinc and tin precursor with other group 11 or Group IV precursors.

No. of Pages: 8 No. of Claims: 7
Title of the invention: DEPOSITION OF SUB-5 NM THICKNESS SILICON DIOXIDE AND METAL OXIDES FILMS AND SOL-GEL DIP COATING PROC

Abstract:
Fabrication of sub-5 nm silicon dioxide films comprises of sol preparation deposition of film by dip method under controlled relative humidity. Tetraethyl orthosilicate (TEOS), 18.5% hydrochloric acid (HCl), ethanol and water were used as the starting materials for preparation of the sol. A sol with typical volume ratio of TEOS : ethanol : HCl : water equal to 1 : 28 : 0.2 : 0.5 used to deposit SiC>2 film. The typical condition for deposition of sub-5 nm SiO2 film was relative humidity less than 15% and dip-withdrawal rate of 20 mm/min. The sub-10 thickness Ti2 film were deposited from a sol prepared using the precursors ethanol, water, tetraisopropyl orthotitanate and 35.4% HCl in a typical volume ratio of 145.5 : 1 : 2.5 : 1 at relative humidity either below 35% or in the range of 65 to 90% and dip-withdrawal rate of 150 mm/min. In the process invented for deposition of TiC>2 films, the metal precursor can be replaced with other metal-alkoxides to deposit sub-10 nm thickness films of the respective metal oxides. For example, vanadium pentoxide, tin oxide, tungsten oxide and zinc oxide.

No. of Pages: 11 No. of Claims: 10
The Present Invention IOT system is hopped-up by Arduino, it consists of Temperature detector, wetness detector, water level detector, DC motor and GPRS module, once the IOT primarily based agriculture observation system starts it checks the water level, humidness and wetness level. It sends SMS alert on the phone regarding the degree. Sensors sense the extent of water if it goes down, it mechanically starts the pump. If the temperature goes higher than the specified extent, fan starts. This all is showed on the alphanumeric display module. This all is additionally seen in IOT wherever it shows data of humidness, wetness and water level with date and time, supported per minute. Temperature will be assail a specific level, its supported the sort crops cultivated.
The present invention gives a remote shrewd head gear which identifies the individual who doesn’t wear cap and who has devoured liquor. It has clever implanted framework in both protective cap and vehicle. Head protector unit recognizes whether the rider is wearing the cap or not. Liquor distinguish sensor is utilized to discover whether a rider has devoured liquor or not. To build up a savvy head gear which sense liquor utilization of the driver and limits the drive by halting the vehicle, the framework is worked with atmega microcontroller, liquor sensor and BLE or RF correspondence module. Another installed framework is created and set in the vehicle which controls the vehicle. The control gadget worked with atmega microcontroller, BLE or RF module, LCD and hand-off with start switch. The head gear sends the detected information to the control unit which forms the information and controls the vehicle.

No. of Pages : 14 No. of Claims : 7
The present invention provides hybrid solar cooking system with solar thermal and Photovoltaics to generate electrical energy for household applications. The energy source is a mixture of the solar thermal energy and also converted into electrical energy that is in common use in kitchens. The transfer of solar heat is a twofold process wherein the energy from the collector is transferred first to an intermediate energy storage buffer and the energy is subsequently transferred from the buffer to the cooking load. The novelty of this invention is to provide a combination of dual application of heat energy and electrical energy to domestic applications. The advantage of this design is flexible and low cost and high performance.

No. of Pages : 14 No. of Claims : 2
The present invention discloses a novel process for the preparation of Ozenoxacin via novel intermediate compound of formula-A. The invention further discloses novel intermediate compound of formula-A and a process for the preparation thereof.

No. of Pages : 21  No. of Claims : 9
**Title of the invention:** STRETCHER CONVERTIBLE WHEELCHAIR

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**Abstract:**
STRETCHER CONVERTIBLE WHEELCHAIR A stretcher convertible wheelchair (100) comprising (i) a frame (106) to withstand the load of a user, (ii) one or more hand levers (103A-N) to convert the stretcher convertible wheelchair (100) to a stretcher position from a wheelchair position and vice versa and (iii) a slider (107) that extends and contracts to rotate a backrest (101) and a leg rest (102) with a rotation of the one or more hand levers (103A-N). When in operation, the one or more hand levers (103A-N) is rotated in at least one of (i) an anti-clockwise direction to extend the slider (107) to rotate the backrest (101) and the leg rest (102) of the stretcher convertible wheelchair (100) in the anti-clockwise direction or (ii) a clockwise direction to contract the slider (107) to rotate the backrest (101) and the leg rest (102) of the stretcher convertible wheelchair (100) in the clockwise direction. FIG. 1

No. of Pages: 21 No. of Claims: 6
A process of making biodegradable tableware is disclosed. The process comprises selecting one or combination of natural starch powder. The starch is modified to oxidizing starch or modified starch, following which high fibre soft wood cellulose is added. The powder is added into a mixer, followed by water, and the powder is mixed. Compatibilizer, nucleating agent, weather resistance agent, anti-fungal agent, and preservatives are added to the mixer. The mixture is added to a pre-heated die device and pressed. A water proofing agent is added to the tableware; which is dried in tunnel drier.

No. of Pages : 18 No. of Claims : 10
**Title of the invention:** THERMAL MANAGEMENT SYSTEM FOR LI-ION BATTERY PACK AT DIFFERENT CLIMATIC CONDITIONS

**Abstract:**
The thermal management for the Li-ion battery pack is a direct contributor to the battery life and efficiency. The invention comprises of the intelligent monitoring system which governs battery pack unit which in turn cools/heats the battery pack during charging and discharging by aiming optimum working conditions. Once the operating temperature exceeds the threshold set by live monitoring of several temperatures (feedback from ambient temperature sensor, temperature readings from the surface of the cells, battery pack temperature and the temperature of the fluid entering and leaving the battery pack), the Intelligent Monitoring Unit will control the thermal conditioning. Hence maintaining the battery pack at optimal working temperature. Dull zone heat treatment is the uniqueness of the Intelligent Monitoring System, i.e. it can perform localized cooling/heating in the battery pack.

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**Name of Inventor:**
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**No. of Pages:** 11  **No. of Claims:** 5
The Patent Office Journal No. 49/2019 Dated 06/12/2019

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(22) Date of filing of Application :20/11/2019
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(54) Title of the invention : AN APPARATUS OF CLOUD COMPUTING EXPEDIENT MANAGEMENT SYSTEM

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(57) Abstract :
The Present invention is based on the reinforcement learning provided in a system/method for predicting the dynamic resource requirements of the users in a cloud computing platform/area. Equipping demand forecasting method of the current invention, the method to determine the VM provisioning delay after providing a step to determine the current state based on the request information is prepared in advance by processing the service. The current system is based on the state and Q-values comprising the step determining a resource amount to prepare the next step and from the service, the selected action (Q-value) is selected to act with the smallest time. According to the invention, an additional probability of occurrence of VM provisioning latency is lower than in the conventional method and the amount of VM provisioning resources to service throughout is higher than other prediction models per second which guarantees to the user to maximize the benefits of the service provider it can be determined.

No. of Pages : 14 No. of Claims : 4
The present invention relates to a music player which uses artificial intelligence (AI) for playing music which is automatically selected based upon the mental state (mood) of the user. The present also provides a method of playing a music based on mood of the user.

No. of Pages : 13 No. of Claims : 10
Corrosion is the main reason for the deterioration of the building which reduces the life time and strength of the structure. There is no such a simple method to find out the strength and corrosion percentage in steel. Oxifrence meter is a sophisticated device which can be used for measuring corrosion and strength possess by steel as in site condition and embedded condition. It will clearly indicate where are the corrosion accursed and how the strength reduced as well as how far corrosion happens. By comparing the value which displays in LED display to the table and chart we were able to predict the strength and corrosion percentage.
The internet now connects a network of interconnected objects to create a smart environment characterized by the term Internet of Things. To modernize the traditional manufacturing system as digitalized through IoT adoption in manufacturing and generate significant economic opportunities by industrial re-shaping, the new data-driven strategy empowers the industries to be more advanced in all possible productive aspects. The future advanced 5G wireless transmission technology has significant potential to promote IIOT and cyber-physical manufacturing systems (CPMS). Here, we propose the architecture of 5G-based IIoT for smart manufacturing.

No. of Pages : 10 No. of Claims : 4
The present innovative invention relates to the development of Nano bio gel incorporated with Garcinia Mangostana (Mangosteen) in dental applications. It specifically relates to the development of Garcinia Mangostana (Mangosteen) incorporated Nano Bio Gel against Porphyromonas gingivalis and Staphylococcus aureus. The invention also pertains to the development of process for preparation of Garcinia Mangostana (Mangosteen) incorporated Nano Bio Gel for therapeutic and preventive purposes in dental applications. Nano biogel formulation for prevention and treatment of peri implantitis comprising effective amount of extract of nano bio particles of mangosteen and gelling agent or excipients or carriers along with preservatives.

No. of Pages : 30 No. of Claims : 10
According to the present disclosure, a system for detecting corrosion in an orifice plate by heating the element by passing a current through it is disclosed. The system comprises a temperature sensing element and pressure transmitter. The pressure transmitter performs the proposed diagnosis method by calculating the time taken to reach the desired temperature which is set by the user. Comparison is made with the user defined desired time to conclude that the orifice plate is corroded. The present system ensures there are no complex computations required for diagnosing.

No. of Pages : 9  No. of Claims : 6
Title of the invention: A METHOD FOR SIGNAL ACTIVITY DETECTION USING MULTIPLE FFT

Abstract:
The present invention relates to a method and a system (110) for simultaneous detection of a plurality of signal activities and parameter estimation within an RF signal. The method comprising the following steps of encoding the RF signal into multiple frames, performing Fast Fourier Transform (FFT) on said multiple frames at multiple N-points simultaneously, thereby calculating a power spectrum with respect to each N-point FFT. The method further comprises determining a signal activity based on a peak value within the frames in the logarithmic scale (dB) with respect to each N-point FFT followed by transmitting the determined signal activity with respect to each N-point FFT to a master activity detector (204) for consolidating a pulse information based on the signal activity, and estimating a plurality of parameters based on the consolidated pulse information for enabling detection of the signal activity of the received RF signal.

No. of Pages: 27  No. of Claims: 10
A method for implementing FFT/IFFT computations for real and complex signals in FPGA or ICs, where an input data sample are received by a pre-processor module and then stored into even and odd banks of a memory bank alternately per frame. A compute unit performs operation on the input data samples fetched from the memory bank by fetching at least 4 data samples per clock based on a common address as part of a first radix butterfly operation and incrementing a data-read address for further fetching another at least 4 data samples as part of a second radix butterfly operation for at least enabling two radix-butterfly operations. Twiddle factors are aligned to a plurality of partial outputs from the radix-4 butterfly operations to facilitate multiplication there-between and lastly data from the odd and even memory banks are read and arranged at the end of pipeline of the radix butterfly operations as FFT output.
**Title of the invention:** DEVICE AND METHOD FOR DETERMINING QUALITY AND FLOW CONTROL OF WATER

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**Abstract:**
DEVICE AND METHOD FOR DETERMINING QUALITY AND FLOW CONTROL OF WATER. Exemplary embodiments of the present disclosure are directed towards a device for determining the quality and controlling the flow of contaminated water with a water meter to function digitally and wireless, and is in conjunction with a digital flow meter along with a solenoid which acts as an automatic water supply control to the destination of users; a colour sensor to detect the colour change in a reagent treated water and to determine whether the quantity of chemical is less than the threshold, and the colour sensor is supplied with a reagent treated raw water from a water supply and storage station; and a communications transmitter and receiver send and receive a data obtained from the device and further process it to be shared with the end users through a network in their mobile and web based applications. FIG. 1

No. of Pages: 16 No. of Claims: 8
ABSTRACT

Ever since the industrial revolution, there has been a steady rise in the amount of energy required for day to day human life. Currently, our main source of energy is from burning fossil fuels. However, a major drawback is the evolution of greenhouse gases on burning these fossil fuels. These greenhouse gases are one of the main causes behind global climate change. Another disadvantage of using fossil fuels is its limited nature. As a result, we are racing towards a future where we extinguish all our fossil fuel sources. The need of the hour is to start using sustainable and renewable sources of energy such as Solar Energy. Conventional method of harnessing solar energy in the form of solar farms requires a large land area. This also results in the centralization of solar energy sources which is not preferred. To overcome this, Stand-Alone PV Systems are required. Solar energy however, is an inconsistent form of energy. This inconsistency is only exacerbated when it is a stand-alone photovoltaic (PV) system. The energy generated can vary depending on the amount of sun exposure the solar panels receive. In scenarios where critical loads are also part of a Stand-Alone system, it is imperative that these loads get consistent power supply. This invention aims to solve this problem by directing the power away from normal loads to critical loads when there is a significant drop in output power from the solar panels. The system uses a combination of switches which connect and disconnect loads from the Stand-Alone System as required. It also monitors the system constantly and updates necessary details onto a Google Sheets file through the internet. This file can then be used for analysis of the system characteristics. The system monitoring and control is done via a NodeMCU. The microcontroller controls the necessary switches and updates the data sheet as and when required. The proposed solution costs around 900 rupees, making it an economically viable solution.
Title of the invention: A WEARABLE NAVIGATION ASSISTANT SYSTEM FOR COGNITIVELY-IMPAIRED INDIVIDUALS

Abstract:
A WEARABLE NAVIGATION ASSISTANT SYSTEM FOR COGNITIVELY IMPAIRED INDIVIDUALS A wearable navigation assistance system (102) for cognitively-impaired individuals is provided. The system (102) includes a memory (104) comprising a database, a sensor unit (106), a control unit (108) and a wireless communication unit (110). The system (102) is configured to (i) obtain the positional information of the cognitively-impaired individual (112) from the sensor unit, (ii) detect deviations in the positional information of the cognitively-impaired individual (112) using a machine learning model trained with dynamic adjustable data set, (iii) determine a wandering behaviour of the cognitively-impaired individual (112) by analyzing deviations in the positional information of the cognitively-impaired individual (112), (iv) generate a navigational assistance information based on the wandering behavior, pre-loaded maps and a dynamically adjustable safe threshold, and (v) transform the navigational assistance information in the form of text into a voice output for providing navigational assistance for cognitively-impaired individuals. FIG. 1

No. of Pages : 18 No. of Claims : 9
Dental varnish composition, methods of preparation and use thereof

Although the anti-cariogenic properties of Licorice have been suggested for over 30 years, it has not been tested in a dosage form that can be used in public health programs. Hence, the present invention presents the details of Licorice varnish, its preparation and its comparison with Fluoride varnish. A combination varnish may provide more benefits by suppressing the acidogenic bacteria in addition to accelerating the re-mineralization process of white spot lesions. Thus, the present invention also provides combination varnishes comprising Licorice varnish and Fluoride varnish.

No. of Pages: 32  No. of Claims: 10
**Title of the invention:** SYSTEM FOR INTERNAL ENVIRONMENT MAINTENANCE FOR LARGE BUILDINGS WITH NOISE ABSORPTION MODULE

| (51) International classification | G01N 27/00 |
| (31) Priority Document No | NA |
| (32) Priority Date | NA |
| (33) Name of priority country | NA |
| (86) International Application No | NA |
| Filing Date | 06/12/2019 |
| (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) Ms. B. SOPHIA |
| 5) Dr. E. S. SHAMILA |
| 6) Dr. LAXMI RAJA |

**Abstract:**
The present invention is related to a system for internal environment maintenance for large buildings. The system comprises plurality of chemical sensors & air sensors with integrating those to plurality of air purifier and noise absorption modules. The air quality is continuously measured inside of the building through plurality of sensors, and the central unit controls the operation of the air purifier accordingly. The system is connected to plurality of mobile computing device to display the status of inside environment of the building with the source of the noise and level of the noise. The present invention is very useful for the hospital campus, educational institutions and residential building to maintain the eco-friendly environment.

No. of Pages: 24 No. of Claims: 9
ABRASION TESTING MACHINE FOR HORIZONTAL CONCRETE SURFACES- 1000-MODEL-2

This present disclosure envisages a Abrasion Testing Machine which is being used to find out abrasion resistance of horizontal concrete surfaces like road pavement, industrial floors, runways etc.; ultimately the durability of concrete. Methodology and assessing criteria adopted in this procedure are based on ASTM C779. Methodology commits a change in accordance to serve the concrete surface in laboratory as well as in field and light weight machine to port as per requirement. This disclosure envisages the change in dimensions of abrasion machine which is fabricated with light weight steel. Wheel attached to the lower end of the machine, rotate with 40 revolutions per minute which exert the abrasive forces on the concrete sample under it. Depth measures after completion of test shows the abrasion resistance by the concrete sample. Abrasion of concrete should examine to define serviceability and durability of the concrete. Properties of concrete are influencing the abrasion resistance. This disclosure culminates with a confirm focus on nature of abrasion on grades of concrete; abrasion resistance of concrete increases with increasing compressive strength. This machine can evaluate the abrasion of concrete with ingredients of concrete, density, age and workmanship.

No. of Pages : 19 No. of Claims : 5
**Title of the invention:** BIOMETRIC FOR IDENTIFICATION OF PERSON LOCATION

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**Abstract:**

BIOMETRIC FOR IDENTIFICATION OF PERSON LOCATION This invention system is related to biometrics technology, which is usually related with the use of distinctive physiological characteristics to identify an individual. It can identify and verify a person by the physical attributes such as fingerprint, color of iris, color of hair, hand geometry etc. The invention system of the biometrics is used in a lift to detect the floor that a person is allowed to access automatically. This is the one to one process of matching where live sample entered by the candidate is compared with a previously stored template in the database.

No. of Pages: 7 No. of Claims: 2
WIRELESS WINDOW BLINDS

This invention uses wireless communication to operate the window blinds. While the user can send the message to the controller, which controls the motor position, it can be used to adjust the structure of window blinds. Here the wireless windows blinds system implements a Wi-Fi or Bluetooth or IOT controlled solution for automated control of household window blinds. Wireless devices provide a widespread platform to fulfill the IoT goal to make all objects connected and easily accessible. The wireless window blinds or window covers consists of two parts. One is control module and another one is smart phone application those are linked with window via wirelessly. The module has motor and micro controller and sensor. Sensor can sense the signal and send to micro controller, which sends the message to the motor to raise, lower and tilt the blinds or covers the window.

No. of Pages : 7 No. of Claims : 2
GPS & IOT BASED VOICE ALERT SYSTEM FOR THE BLIND

This invention system is related to a GPS and IOT based voice alert system for blind people. GPS and micro controller, micro camera are connected with this system of blind stick or wheel chair. Here the microcontroller has transmitter kit and receiver kit. The transmitter kit located in front of wheel chair or stick and receiver is placed in their dearest person. When this system is switched on, then the camera will show the presence of objects or hurdles before the blind person to guardian. Then the guardian can send a voice signal to the blind person, to safe guard the person.
**Title of the invention:** VIRTUAL DISPLAY BASED MENU ORDERING IN RESTAURANT

**Abstract:**
VIRTUAL DISPLAY BASED MENU ORDERING IN RESTAURANT This invention system is related to a virtual reality display based menu ordering in restaurant, there is no need of a person to take order from the table. The menu will be automatically displayed on a virtual screen on the dining table and we can directly order the menu with the help of virtual screen. This new technology consists of micro controller and sensor. The micro controller is interfaced with input and output modules. The input module is a virtual visible screen sensor that is placed in front of the user. Sensor or laser or beamer, is used to project a visible screen onto any surface or table. These sensor or camera is to detect the motion of user finger. This sensor connected with the micro controller to transfer the sensing data to computer, thereby transferring the order of the user for processing.

No. of Pages: 8 No. of Claims: 1
Title of the invention: GSM MODULE MONTHLY ELECTRICITY BILLING VIA SMS AND ALSO DISPLAY ON LCD

| (51) International classification          | H04M11/002 |
| (31) Priority Document No                 | NA         |
| (32) Priority Date                        | NA         |
| (33) Name of priority country             | NA         |
| (86) International Application No         | NA         |
| Filing Date                               | NA         |
| (87) International Publication No         | NA         |
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| Filing Date                               | NA         |
| (62) Divisional to Application No         | NA         |
| Filing Date                               | NA         |

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Abstract:
GSM MODULE MONTHLY ELECTRICITY BILLING VIA SMS AND ALSO DISPLAY ON LCD
This invention proposes a method to reduce man power and time for determination of electricity consumption. This is a GSM based energy meter reading system and load control through GSM. Here micro controllers, LCD display, GSM module, relay, are connected together and used to design auto electricity billing. The micro controller is the heart of this project, which will continuously monitor the energy meter reading and it will continuously send the signal to GSM module. This GSM module can send the message to the user. The LCD display is interfaced with micro controller and it is used to display the meter reading.

No. of Pages: 7
No. of Claims: 1
(54) Title of the invention: EMAIL PROCESSING ARTIFICIAL INTELLIGENCE (EPAI)

(51) International classification: G05B13/02
(31) Priority Document No: NA
(32) Priority Date: NA
(33) Name of priority country: NA
(86) International Application No: NA
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Filing Date: NA

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(57) Abstract:
Growing demand of Machine Learning and Artificial Intelligence led us to frame the idea to work on our proposed system Email Processing Artificial Intelligence (EPAI). Through our work, we have utilized emails for iterating a personal computer's files, giving work assignments to the personal computer, and to manage and prioritize our mails with automatically downloading of the attachments to the personal computer. Our work allows the user to access the command line through emails, set events in their personal computer and retrieve information by giving tasks thru mails. In this way, the user can access any file in his PC through mails to meet all his system needs. The above features can only be accessed when the PCs is On or in the sleep mode. The system is tested for its efficiency and proved to be a deserving work in AI using emails.

No. of Pages: 12
No. of Claims: 7
Title of the invention: IOT ENABLED WIRELESS SENSORS BASED NATURAL EXTRACTOR ANALYSER FOR TEXTILE INDUSTRIES WASTEWATER

Abstract:
Azo dyes are ubiquitously used in the textile industry. These dyes are often toxic, carcinogenic and xenobiotic so these dyes require cost effective treatment methods to processes the textile based wastewater before discharging in the water bodies. In this context, the study aims to treat the dye based wastewater using natural adsorbents - Amla. The study evaluates the performance individually and in hybrid mode in the fixed bed column reactor to increase the treatment efficiency. The main motive of the study is to use the waste extracted from natural products and to treat the dye based wastewater in a cost effective manner. Continues measurement of the concentration of dye reduction will help us to understand the efficiency of the processes. However it requires sophisticated instruments and is a difficult task, so the proposed IoT based sensors will make the system more easy and cost effective. The invention uses GPS module to collect the concentration of dye at the inlet and outlet sensor to detect the treatment efficiency at various locations. Wi-Fi network available it updates concentration of dye to the cloud storage and sends SMS notification.

No. of Pages: 8 No. of Claims: 8
Abstract:
As the manufacturing sector is leaning towards additive manufacturing leaving the traditional methods behind. Wire + Arc additive manufacturing technique is the growing technique to fabricate the components in the aerospace, defence and automotive sector. This technique is a replacement for the laser sintering technique. Also this technique fabricate the component faster and more economical as compared to the other additive manufacturing technique. In the present research work, attempt has been made to establish Wire + Arc additively manufactured component using UNS N06625 alloy wire. UNS N06625 alloy is widely used in the high temperature application. The major problem associated with Wire + Arc Additive manufacturing technique is to establish the process parameters to obtain the defect free components. Successful attempt has been made to build the thick slab wall component using UNS N06625 alloy using conventional pulsed current Gas tungsten arc welding technique. The established process parameters will help us to create the real time components. The detailed micro structure analysis will be studied on both longitudinal and transverse direction to check the homogeneity of the micro structure. Micro segregation in the dendritic core and interdendritic regions are evaluated. The outcome of the present work will be highly beneficial to power sector and aero sector to fabricate the components in the UNS N06625 alloy.
Title of the invention : IOT BASED POWER THEFT DETECTION SYSTEM

Abstract:
Power theft is a critical issue faced by the Electricity board in most of the states in India. Bypassing and hooking are the usual methods followed by the people. In this paper a system has been proposed to detect the location of theft. In this system, the process of current measuring and comparing at the household distribution of current is done indirectly from the electric pole to an intermediate distributor box and then to the individual houses. The current is measured periodically in the distributor box and is posted to the server database for each house using GSM/GPRS module. Similarly, for each house electric meter is designed which can measure the value of the current and post the same to the server database periodically using GSM/GPRS module. At the time of the installation of the electric meter the details of the users are stored in the database through a user friendly mobile application including the address, latitude, longitude using mobile GPS and the photograph of the users house/area. Upon successful comparison between the current values from distributor box and electric meter in the server if we get a marginal difference between the currents then the theft is detected. Finally, the details of the user are shared with the authorized mobile application including the address and photograph of the area. The latitude and longitude are also used to show the area of theft in Google maps. And hence the required steps are taken. The same process is used for hooking but on the individual electric poles.

No. of Pages : 8 No. of Claims : 5
The present invention provides a self rechargeable drone (70) for automatically recharging the battery when the power source signal received from the distributed computer system (80). The self rechargeable drone (70) comprises a distributed computer system (80), battery (79), camera (77), antenna (76), transceiver (78), flipping wings (71, 72, 73, 74) front (81, 82) and rear (83, 84) legs. The transceiver, camera, antenna and input signals are continuously passed to the computer system and it performs with the aid of artificial intelligence knowledge by using battery (79) power source. The flipping wings (71, 72, 73, 74) are moves based on the wing mechanism (75) to elevate the body with respect to distributed computer program signal. The front (81, 82) legs are foldable and the rear (83, 84) legs are the input power terminals of the self rechargeable drone.

No. of Pages : 11 No. of Claims : 9
The present invention proves that based on the experimental investigation lemon grass oil diesel composition is a very good substitute for a diesel fuel. From the experimental study, the brake thermal efficiency of the engine with lemongrass diesel blend was marginally near with neat diesel fuel. Brake specific energy consumption is lower for lemongrass diesel blends than diesel at all loading. The emission characteristics are higher than pure diesel but the LGO10+D90+50ppm has relatively better performance with respect to other blends. The LGO10+D90+50ppm blend shows better performance than other blends and raw oil. This blend shows a lower emission characteristic than diesel.
The present invention provides a semi-automatically engaging and disengaging handbrake of a passenger car system. This system takes electrical input and produces a mechanical output for engaging the brakes. On turning the ignition key ON, the brake disengages. The brake engages on turning the key OFF. An electrical pump with pressurized oil operates the wheel cylinder, which in turn pushes the brake lining towards the brake drum. This emergency braking system consists of a master cylinder and a pair of wheel cylinder. The master cylinder acts as a reservoir. An additional switch is also provided for engaging and disengaging of emergency braking system. A safety switch is provided, in case of emergencies. This system of automatic emergency braking system provides a very good comfort for drivers while driving.

No. of Pages: 13  No. of Claims: 5
(54) Title of the invention: ROBOT AND METHOD FOR PROVIDING CONTENT IN A NEWSPAPER AND OTHER PHYSICAL DOCUMENTS

(51) International classification: G06F17/212
(31) Priority Document No: NA
(32) Priority Date: NA
(33) Name of priority country: NA
(86) International Application No: NA
Filing Date: NA
(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:
Embodiments herein disclose a method for providing a personalized content to a user. The method includes flipping, by a mechanical flipping arrangement (180), at least one page of a physical document including newspaper, scanning, by a scanning unit (160), the page of the physical document and converting the at least one scanned physical document into a readable format. Further, the method includes analyzing, by a data item determination unit (150a), the at least one converted physical document and determining at least one data item in at least one physical document. Further, the method includes classifying, by a content classification unit (150b), at least one content in the at least one determined data item. Further, the method includes prioritizing, by a content prioritizing unit (150c), the at least one classified content. Further, the method includes providing, by an output unit (140), at least one classified content to the user.

No. of Pages: 29 No. of Claims: 10
The present invention relates to the field of managing user credential data including passwords by encrypting them through ciphertext. A ciphertext generation system (1) using ciphertext comprises of user (11), computer system (21), server (31) and substitution module (41) whereas said module (41) comprises of dynamic key generation module (43) wherein said key generation module (42) comprises of arithmetic module (43), transformation module (44) and mapping module (45).
Title of the invention: SMART MIRROR DISPLAY WITH NEWS & TEMPERATURE BASED ON IOT

Abstract:
This invention proposes a mirror to receive news online and display it on the mirror screen along with other details including current room temperature, and time. Here we use raspberry pi, temperature sensor and IOT based circuit to design a smart mirror that are interfaced together. We use a precisely modeled panel for the outer frame of the smart mirror, then the glass with a back frame to encase the system. Here the precisely modeled mirror is fitted into the frame cavity then it mounts for the display housing to be fitted in mirror. Then use raspberry pi based processor to connect with internet using IOT circuit through the use of Wi-Fi module. It allows the data or signal to receive through the IOT platform. The temperature sensor can be connected with this system to display the temperature of the room.

No. of Pages: 7 No. of Claims: 2
The present invention is related to an intelligent deep-well rescue system using ultrasonic sensors. The system for rescue a human in a narrow diameter deep-well (bore-well) comprises an ultrasonic sensor module, a grappling module, a central computing unit. The objective of the present invention is to solve the problems of the prior arts in solving issues of rescue of human being from the deep-well or bore well.

No. of Pages : 18 No. of Claims : 7
Title of the invention: SMART SOLAR POWER GENERATION

Abstract: This Device is an combination of Solar Powered Generation System and Diesel Powered Generation System which includes a modified Alternator for multiplying the generated power. The Industrial Alternator used in this Smart Solar Power Generation System consist of a unique way of cooling the temperature raised in the Device due to continuous working. This method of cooling is more efficient that the normal industrial alternators which are currently being used in normal Generators. These Industrial Alternators are the important part of the Device as it plays the main role of Power Multiplication. Field of this Invention: This field of invention relates to Solar Powered Generators and Diesel Powered Generators to make an more efficient system to improve the existing Solar Powered Power Generation Technology.

No. of Pages: 16
No. of Claims: 6
**Title of the invention:** DESIGN DEVELOPMENT OF FAULT DIAGNOSIS BY USING FUZZY NEURAL NETWORKS FOR HYDROPONIC SYSTEMS IN IOT ENVIRONMENT

**Abstract:**
In aquaculture IoT (Internet of Things), the equipments are deployed in ponds in remote areas. Frequent faults occur in such environments and the professionals lack knowledge, hence not able to attend these faults. Experts need to perform the maintenance work in outdoor to clear the faults. This invention focuses on intelligent method for the diagnosis of fault depending on fault tree analysis and neural network of fuzzy logic. The proposed method presents the logic structure of faults and symptoms of faults in the fault tree. The extraction of rules from fault trees avoids redundancy and duplicating. The relationship between faults and symptoms of faults are mapped by the fuzzy neural network. Various fault symptoms are caused by one fault and various faults can cause a single fault symptom in aquaculture IoT. Four relationships of fault are obtained. Diagnosis is rapid in relationship of one symptom to one fault, two symptoms to one fault and two symptoms to two faults with higher precision. But the pattern of one symptom to two faults is not precise. This invention diagnoses various kinds of faults in the field of aquaculture IoT.

No. of Pages: 10  No. of Claims: 6
(54) Title of the invention : DESIGN OF POWER METALLURGY COMPACTION TOOLS

(57) Abstract :
Powder materials play an important role in many industries (e.g. metals, ceramics, and pharmaceuticals). In order to make useful parts the powders must first be pressed/compacted to a high enough relative density to give the preform sufficient strength to permit subsequent handling and processing. Powder metallurgy has been extensively investigated due to high mechanical strength and potentially for cost reduction. The current investigation focuses on performance of aluminium powder in producing alternative materials for engineering applications. The characteristics of porosity under different density, hardness, compression strength were analyzed, The result indicates variation in density with respect to pressure, which increases the strength of any components. The proposed process has been simulated by using the DEFORM-F3 (Design Environment for Forming). The experimental study has been performed in the A.I.R.S Industries. The results of the experimental and analytical solutions are analyzed and it has been observed in good agreement.

No. of Pages : 21 No. of Claims : 5
**Title of the invention:** KITCHEN BOX

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3) I. Mary Linda
4) Dr. Arulselvi

**Abstract:**
ABSTRACT KITCHEN BOX This invention is related to a system and method of detection of availability of various provision items in a kitchen. Provisions are stored in individual trays and each tray contains a sensor. The sensor keeps on detecting the amount of goods in each such tray. This sensor is connected with our smart phone, wherein the sensor senses the quantity of the kitchen provisional items available and sends the appropriate message to the user, to enable reordering of the items.

No. of Pages : 6 No. of Claims : 2
Title of the invention: MULTIFUNCTIONAL AND SMART SYSTEM FOR SMALL-DIAMETER DEEP WELL AUTOMATIC RESCUE

Abstract:
The present invention is related to multifunctional and smart system for small-diameter deep well automatic rescue. The objective of the present invention is to solve the problems of the prior arts in solving issues of rescue of victim in small-diameter deep well through automatic rescue. The disclosure presents the system for small-diameter deep-well automatic rescue of a victim stuck inside of the small-diameter deep-well with using a movable rescue machine, a holding and movement module and an central computing unit.

No. of Pages: 26  No. of Claims: 7
The present invention relates to a wave deflection system (100) for coastal protection. The system (100) is erected at a sea shore. The system (100) facilitates nourishment of a beach with deposited sand particles and protection of shore against erosion. The system (100) comprises a series of piles (110) arranged in a spaced apart configuration in a surf zone of a sea shore, and a plurality of wave deflecting units (120). Each unit (120) is supported between two adjacent piles (110). Each wave deflecting unit (120) has a plurality of curved plates (130) arranged in a stacked configuration. The curved plates (130) are arranged such that a topmost portion of a top curved plate coincides with the mean sea level of the shore.

No. of Pages : 18 No. of Claims : 7
Title of the invention: UNIVERSAL COMPACT BEDSIDE EXAMINATION KIT

Abstract:
The present invention discloses an user-friendly, portable, light weight and universal compact bedside examination kit to examine a subject without searching and taking essential medical tools each and every time and allowing physician to handle the tools easily by simply projecting the tools. The examination kit of the present invention comprises of a pocket diary type enclosure housed with characterized combination of medical tools comprising of pen torch, inch tape, knee hammer, two point discrimination, fine touch and crude touch pin, tongue depressor, small socket to accommodate substances in which each of the medical tools are fixed in a metallic clamp with screws inside a rod, and by loosening and pulling the respective screws which positioned on the enclosure, the respective medical tool shall be projected out of the enclosure by a principle of Bearing puller mechanism.

No. of Pages : 11  No. of Claims : 5
AUTOMATIC SIDE LAMP SYSTEM FOR VEHICLE TO REDUCE GLARE.

AUTOMATIC SIDE LAMP SYSTEM FOR VEHICLE TO REDUCE GLARE is an energy efficient, simple and effective solution for reducing glare and improving the visibility caused by the light from headlamp of oncoming vehicle on the road. When LIGHT SENSOR (5) detects light from oncoming vehicle on the road controller (2) is turned on by using a switch (8). The controller (2) then turns on DC TO DC CONVERTER (4) thereby turning on the lamp on the lower right side of the vehicle (9) illuminating the right side of the road. The light intensity of the lamp on the right side should be greater than the light intensity of headlamp of the vehicle it is fitted. This is done to constrict the pupil of the oncoming driver’s eye, thereby reducing the amount of light entering the eye from the headlamp thus reduced glare and improve visibility.

No. of Pages : 16 No. of Claims : 5
Misalignment occurs due to manually changing the position of antennas which is the method used currently. To overcome this problem this invention introduces a new automation technology in antenna positioning, which is antenna positioning system by using of IOT. This system allows the user to remotely change their positioning of antennas based over IOT. Here an accelerometer sensor and motor and micro controller are used to change the position of antenna. Accelerometer sensor gives the orientation of antenna in X-Y direction. This sensor is used to measure the acceleration force. Here the sensor and motor are used to change the antenna direction. The sensor will be mounted on the antenna to detect its direction and its direction will changed by motors by using IOT.
The Patent Office Journal No. 49/2019 Dated 06/12/2019

Title of the invention: HYDRAULIC/PNEUMATIC REMOTE CONTROLLER FOR GUN SHOOTING

Abstract:
ABSTRACT HYDRAULIC/PNEUMATIC REMOTE CONTROLLER FOR GUN SHOOTING This invention is a remote controller for gun shooting. The invention is a system comprising a linear actuator, which moves a load which can be an assembly, components, or a finished product, in straight line. The actuator converts the energy into motion or force. This invention proposes the use of hydraulic/pneumatic actuator for gun shooting. Here we use hydraulic/pneumatic and remote controller. The hydraulic actuator is consisting of piston inside a cylinder. The pressure from the manual pump or external compressor moves the cylinder, where pressure is high the cylinder moves along the axis, creating a linear force, then the piston returns to its original position by either a back force it can extended the motor force. This system also attached with screen for user to view the gun set point clearly.

No. of Pages: 7 No. of Claims: 1
The Purpose of this invention is to apply mobility in the power requirements for electric vehicles. Since the requirements for power is gradually increasing, the cost of implementation grows. A specially designed inverter for electric cars is attached to a UAV (000). The UAV (000) is capable of flying autonomously by carrying a payload up to 80kg with a velocity of 40mph and above. Intimation from the receiver requiring fuel or power via mobile application initiates the process. UAV (000) with the payload reaches the location of the receiver and delivers the power to electric vehicle. Then the UAV (000) returns to the base station.
Nowadays, Mobile becomes an essential part of our life, and it is also an inevitable medium for communication in the present era. It keeps us connected from mail access, travel booking, etc. The amount of personal information and sensitive information like username, password, and transaction details are routinely stored in the device. There is a possibility of information access when the thief steals the Mobile. It is a massive data loss for the mobile owner, especially private information. There is a general method to track the Mobiles location either from the device (GPS) or from the network (SIM Card Module). But in most cases, the stolen or lost Mobile will go to switch off mode. Then the data theft or accessing financial/ personal information; the most significant gain is to use the device. Although the IMEI based lock is possible is there to track the Mobile using their mobile data. But, it needs to change the Sim card of the mobile. Smart hackers, they do use the device without a Sim card as long as they want. It is impossible to track that Mobile in such cases. To avoid these sequences, a new solution is proposed to protect the sim card of the Mobile from the thief based on fingerprint lock. This invention protects the Mobile based on the following steps. In general, to remove a Sim card from the Mobile, a thief needs to make a gentle punch at the SIM Card Port to replace with a new Sim card. In the proposed model, to eject a Sim card physically, the Mobile performs the fingerprint authentication to unlock the Sim card port. Then, Mobile ejects the Sim card after the successful authentication process only. User has to follow the same authentication process to insert their new sim card. If the fingerprint is not matched with the owner's identity, Mobile will send a notification SMS to the stored alternate mobile number. Then, the Mobile gets locked and it does not eject the sim card. This verification process happens even when the phone is in switched off mode. A user cannot remove the Sim card when the Mobile does not have the battery charge. This fingerprint-based authentication process helps to find the Mobile location by protecting the Sim card when the thief steals it.

No. of Pages : 8  No. of Claims : 6
Title of the invention: NEW INVERSE LOGARITHMIC KERNEL FUNCTION FOR SPH TO SOLVE COASTAL ENGINEERING PROBLEMS

Abstract:
The method of Smoothed Particle Hydrodynamics (SPH) is getting mainstream starting late to model non-linear problems of coastal engineering applications. The accuracy of SPH method relies upon both kernel approximation and particle approximation. For modeling fluid dynamic problems, the kernel function should be a continuous function with no discontinuities. In most of the research works on kernel function, there are numerical drawbacks like stability, accuracy and convergence of SPH method and there comes a need for the research to be carried out on the numerical analysis of the SPH method. Hence, a new smoothing kernel using inverse logarithmic function is formulated. It is also observed that the proposed smoothing function restored particle consistency and displayed some unique features like minimal error, better accuracy and enhanced efficiency in kernel approximation. A numerical test case, say real scaled model of dam - break phenomena has been provided to show the adequacy of the proposed smoothing function.

No. of Pages : 43 No. of Claims : 8
**Title of the invention:** ROBOTIC PORTABLE CEMENT FLOOR CONSTRUCTOR

| (51) International classification | :G06T17/00 |
| (31) Priority Document No | :NA |
| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
| (86) International Application No | :NA |
| Filing Date | :NA |
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| (61) Patent of Addition to Application Number | :NA |
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| Filing Date | :NA |

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**Abstract:**
ABSTRACT ROBOTIC PORTABLE CEMENT FLOOR CONSTRUCTOR

This invention system is related to an automatic robotic portable cement floor constructor. We can use the portable cement mixer and the robot can construct the floor by using a micro controller. This system also has sensors to detect the presence of an obstacle. If an obstacle is present this cement mixer can sense it and to send the message to controller to stop the operation of the device. This robot acts as a floor constructor, so that floor plastering can be done quickly and easily and smoothly.

No. of Pages: 6 No. of Claims: 1
**Title of the invention:** CAR DIGITAL SIDE VIEW MIRROR WITH ZOOMING AND DETECTION WHILE RUNNING

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**Abstract:**
ABSTRACT CAR DIGITAL SIDE VIEW MIRROR WITH ZOOMING AND DETECTION WHILE RUNNING

This invention relates to the digital technology which is used to support modern cities daily and also it gives accurate result when compared to the analog technology. This invention system implements a digital display screen with this mirror. This digital screen has camera which is located with side mirror of car or vehicle if the user want to zoom picture of behind car they can use this digital display screen. When the driver wants to see a clear and full view, then he can zoom the picture, by touching the digital screen, which will cause the image to be zoomed and show the picture clearly. If the driver does not like to zoom this picture, then he can again press a switch then the mirror will show the picture behind the car in the normal manner without zoom. This is very user friendly, and it gives the clear picture to drivers.

No. of Pages: 7
No. of Claims: 1
Title of the invention: 'VN' LOCKING MINIPLATE FOR MANDIBLE FRACTURE FIXATION.

Abstract:
Fracture mandible management has evolved steadily with various treatment options aiming towards normal functioning of the jaw. VN Locking Miniplate for Mandible fracture fixation is a newly designed plate for use in Oral and Maxillofacial surgery. It is designed with the concept of involving both the lines of osteosynthesis as explained by Champy which is the basis for fracture fixation in mandible. With this design we aim to achieve same stability across fracture line as it is achieved with two miniplates. Since the plate is 2 dimensional negotiating the nerve or other anatomical structures becomes much more simple. Thus a single plate with the modified V design, 2 dimensional stability and interlocking mechanism provides adequate support across the fracture.

No. of Pages: 6  No. of Claims: 7
The invention relates to the field of orthodontics and the present disclosure envisages an orthodontic bracket slot deformation testing system and applications thereof. The system (100) comprises a base (102), rectangular block (103), a pair of columns (104), a horizontal guide rail (106), a support structure (108), an Allen bolt engaged with cylinder (110), a Tee bar with Allen key (112), a load sensing unit (114), and a testing unit (116). The support structure (108) has a pocket (107) configured thereon to receive an orthodontic bracket (115). The Tee bar with Allen key (112) is connected to proximal end of the Allen bolt (110). The torque key (112) is configured to be manually rotated in tandem with the Allen bolt with cylinder (110) to apply load on slots of orthodontic bracket (115). The testing unit (116) calculates angle of twist of the archwire, archwire play, archwire force/torque exerted thereon.
**Title of the invention:** DENTAL IMPLANTATION DEVICE

**International classification:** A61B1/247

**Priority Document No:** NA

**Priority Date:** NA

**Name of priority country:** NA

**International Application No:** NA

**Filing Date:** NA

**International Publication No:** NA

**Filing Date:** NA

**Patent of Addition to Application Number:** NA

**Filing Date:** NA

**Divisional to Application Number:** NA

**Filing Date:** NA

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2) Dr. Nandini Suresh
3) Dr. J.S. Haritha

**Abstract:**
The present invention relates to a dental implantation device comprising a driver having a first shaft 1 and a second shaft 2 meshed together for transmission of motion of the device, a tether body 3 equipped with a retaining aperture that is encircled on the first shaft 1, wherein the tether body 3 incorporates ring shaped aperture for rotating the first shaft 1 about a vertical axis, a bevel gear arrangement configured within the driver for converting the vertical axis motion of first shaft 1 into a horizontal axis motion of a second shaft 2, a restorative wrench 4 associated with the second shaft 2 that rotates along with the second shaft 2 for screwing the dental implant of a person.

No. of Pages: 10  No. of Claims: 6
### Title of the Invention
ORAL CARE SYSTEM

### Abstract
The present invention relates to oral care system, comprising a body having multiple bristles for brushing a user’s teeth; a sensing unit mounted on the body analyses motion and position(s) of the bristles while performing brushing; a cavity sensor used for sensing a cavity region in the person’s teeth; a microcontroller connected with the sensing unit that takes input from the unit to classify and compare the user’s brushing pattern with a preset brushing pattern in order to generate a guiding message, also the microcontroller analyses output of the cavity sensor and generates relative signals; a container equipped with a disinfectant that releases the disinfectant on the cavity upon receiving said signals in order to cure the cavity region; and a display unit connected to the microcontroller for displaying the message and patterns of brushing.

No. of Pages: 15  No. of Claims: 10
(54) Title of the invention : MULTI-FUNCTIONAL STETHOSCOPE DEVICE

(51) International classification : A61B7/02
(31) Priority Document No : NA
(32) Priority Date : NA
(33) Name of priority country : NA
(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 :
The present invention relates to a multi-functional stethoscope device comprising of an electrocardiography sensor 7 installed inside a chest piece 3 for digitally sensing the heart rate, a ring attached with the chest piece which is equipped with a blood pressure sensor installed inside a ring 10 for sensing the blood pressure, a frequency measuring unit attached to the chestpiece for measuring low-pitch and high-pitch sounds from heart, a microcontroller which receives the signals from the sensors and generates a set of data regarding blood pressure and heart rate, a display unit 2 which is associated with the microcontroller for displaying the measured data, a battery installed in the display unit 2 for providing power to it; a charging port 8 for charging the battery and a switch 9 for switching on and off the stethoscope device.

No. of Pages : 15 No. of Claims : 8
The present invention relates to a wearable cardiac pacing device comprising an inflatable body 1 equipped with an orientation sensor and multiple air bags, wherein the sensor detects a change in orientation of the body 1, an ECG sensor 2 connected to the body 1 for measuring electrical activity of the heart, a control unit 3 interlinked between the orientation and ECG sensor 2 for inflating air bags in case of low heart rate and change in orientation are detected simultaneously in order to prevent the user from getting an injury in case he/she falls due to cardiac arrest, and an electric stimulator 4 installed in the device wherein the stimulator 4 on communication with the control unit 3 generates pulse vibrations upon detecting the low heart rate and assist the user’s heart to beat regularly.

No. of Pages: 11 No. of Claims: 4
Title of the invention: **DEVICE FOR STABILIZING BREATHING DISORDER**

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**Abstract:**

A device for stabilizing breathing disorder comprise of microphone 1 placed for receiving acoustic signals of the patient’s respiration, a housing unit 3 attached with the microphone 1, where the housing unit 3 comprise of a processor for analysing the acoustic signals so as to classify the respiration into normal or abnormal respiration rhythms, a thermal pad fabricated on the housing unit 3 for providing heat therapy to the patient, at least one graphene based temperature sensor configured on the thermal pad to detect an amount of heat transmitted from the pad, at least one microcontroller linked with the sensor and pad for generating a command signal to control the therapy upon receiving of the amount of heat detected and at least two containers 4 fabricated on the unit in to carry drug items (i.e. medicine, inhaler).

No. of Pages: 12
No. of Claims: 8
The present invention relates to a dental flossing device, comprises a body 6 having two end i.e. upper and lower end consists of two tines 2, 3 i.e. first and second tine 3 fixed at a upper end, a circular thread 1 for cleaning plaque and food particles present between teeth 11, a gear 8 for rotating the thread 1 a knob 7 for rotating the gear 8 manually, two sponges 4, 5 i.e. first sponge 4 for applying isopropyl alcohol to the thread 1 and second sponge 5 for cleaning the thread 1, a thread sensor 9 for detecting usable/unusable condition of thread 1, a controller for illuminating a red LED upon detection of unusable thread 1 and a battery to provide electrical energy to the controller and LED.

No. of Pages : 11 No. of Claims : 5
(54) Title of the invention : HEALTH MANAGEMENT SYSTEM

(51) International classification : G06Q10/10
(31) Priority Document No : NA
(32) Priority Date : NA
(33) Name of priority country : NA
(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

(57) Abstract :
The present invention relates to a health management system, comprises of a wearable component constructed in such a manner that fits with a user’s body, a heartbeat sensor for detecting heartbeat of a user, an oxygen level sensor for detecting oxygen level of the blood of the user, a blood sugar for detecting sugar level of the user’s blood, a controller that generates a command signal upon receiving the heartbeat and a data signal upon receiving the oxygen level, sugar level and heartbeat, a communication module for transferring the data signal to a cloud, a pacemaker that controls heart rhythm upon acquiring a command signal through the communication module, a display for displaying an information from the data signal, a battery to supply electrical energy to the controller and a motorized injection for injecting drug during heart attack in case of failure of pacemaker.

No. of Pages : 12 No. of Claims : 7
Title of the invention: TOOTH EXTRACTION DEVICE

Abstract:
The present invention relates to a tooth extraction device, comprising an elongated body, a clamp assembly for clamping a tooth of the user, a pressure sensor for sensing amount of pressure exerted by the clamp assembly while performing clamping of the tooth, a control unit for generating a command signal in case the pressure exerted on the tooth goes beyond a threshold value, a trigger having a rack and pinion arrangement, wherein the pinion rotates upon pressing of the trigger, a cable for transmitting power from the trigger to the clamp assembly for assisting the clamping of the tooth, a pair of motorized locking bars for locking rotation of the pinion in case the pressure exerted on the tooth by the clamp assembly reaches a threshold value in order to prevent damage of the tooth.

No. of Pages: 13  No. of Claims: 7
The present invention relates to an eye care system, comprising a frame 1 associated with the system that comprises of a holding unit for accommodating a person’s head on it, a tonometer 3 installed for measuring eye pressure within the eye, an auto refractor 2 attached to the tonometer 3 for determining eye power, a motor 4 mounted on frame for flipping the auto refractor 2 and tonometer 3; a camera 5 installed for capturing image of the person’s eye, a micro controller associated with the system that extracts a set of features from the image and compares the extracted features with a predefined data for detecting presence of eye hemorrhage, an infrared emitter and sensor assembly used for detecting line of sight in the eye for eliminating error during the eye checkup, a LCD 6 used for displaying the values of eye power, eye pressure and eye hemorrhage.

No. of Pages: 12 No. of Claims: 7
Title of the invention: SUCTION AND IRRIGATION DEVICE

Abstract:
The present invention relates to a suction and irrigation device, comprises a hand piece 3 for holding device while performing suction and irrigation, two resilient tubes 1, 2 for providing suction and irrigation to a user’s body, a y-shaped joint 7 for delivering suction or irrigation to the outlet, a container for storing fluid, two pressure sensors 10, 11 for detecting pressure inside the suction 1 and irrigation tube 2, a controller for turning on/off the pump upon detection of lesser pressure, two clamps 5, 6 for pushing/releasing two tubes 1, 2, two LED™s for indicating off and on condition of pump, a battery for providing electrical energy and a handle 4 for hanging the hand piece 3 while performing suction and irrigation.

No. of Pages: 10 No. of Claims: 6
Title of the invention: DENTAL RESTORATION DEVICE

Abstract:
The present invention relates to a dental restoration device, comprising a tapered body having an abutment portion 1 configured with a telescopic arrangement for accommodating a dental restoration component, wherein the portion 1 adjusts according to size of the restoration component, a divergent collar 2 fabricated within the body for wedging the body into the cortical bone of a jaw and the collar include micro threads 3 in order to engage with the cortical bone, multiple external threads 4 crafted on the body for screwing inside the cortical bone up to a predefined depth and external threads are configured with painless needle patches in order to reduce pain while implanting restoration component and an apical end 6 adapted for piercing medullar bone for carrying out implantation of the restoration component.

No. of Pages : 11 No. of Claims : 6
Embodiments provide a receiver for improving signal recovery in a communication system and a method thereof. The receiver receives signal from a transmitter transmitted over a predefined channel. The signal is associated with information bits. Current bit of the information bits associated with the signal is detected at the receiver by using one or more threshold values. The one or more threshold values are defined according to a previously recovered bit detected at the output of the receiver. Bit Error rate (BER) is improved based on detection according to the one or more threshold values. Selection of threshold values is based on the nature of previously detected bit. Threshold values depend on the parameters of the system. The signals are then recovered in form of information bits at the output of the receiver after improving the BER.
(54) Title of the invention: METHOD FOR PREPARING NANO BIOPESTICIDES AND DELIVERING TO PLANT SOURCES USING NANO TECHNOLOGY

(51) International classification: A61K9/12
(31) Priority Document No: NA
(32) Priority Date: NA
(33) Name of priority country: NA
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(87) International Publication No: NA
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2) Dr. R. SHARADHA
3) Dr. K. ABBULU
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2) Dr. R. SHARADHA
3) Dr. K. ABBULU
4) Dr. RAMA MOHAN REDDY TUMMALURU

(57) Abstract:
METHOD FOR PREPARING BIOPESTICIDES AND DELIVERING TO PLANT SOURCES USING NANO TECHNOLOGY
Exemplary embodiments of the present disclosure are directed towards a method for preparing biopesticides and delivering to plant sources using nano technology, comprising: identifying one or more plants with highest angiogenic potential; chemical isolation, purification and identification of principle components from crude extracts by column chromatography, TLC, HPLC, IR and NMR; preparing nanoparticle and chemical characterization of nano bioformulations of pesticides using HPLC, DLS, XRD, TEM and FTIR; and evaluating bioactivity of nano formulated biopesticides through in vitro and in vivo assays. Fig 4.

No. of Pages: 14  No. of Claims: 1
Title of the invention: METHOD FOR EXTRACTING STARCH TO PRODUCE BIOPLASTIC MATERIAL

Abstract:
Exemplary embodiments of the present disclosure are directed towards a method for extracting starch to produce bioplastic material, comprising, extracting starch from rice bran, filtering extracted starch of the rice bran. Applying centrifugation technique to the filtered starch of the rice bran; and converting the filtered starch of the rice bran into a bioplastic material. FIG.2
Title of the invention: MUD REMOVER FOR COLUMN CONSTRUCTION WITH CRANK SHAFT MECHANISM

Abstract:
ABSTRACT MUD REMOVER FOR COLUMN CONSTRUCTION WITH CRANK SHAFT MECHANISM This invention introduces a new technology which is a sand/mud remover in particular square or round shape in the ground for Column/pillar construction. Removing of sand or mud from the particular area is done by robots. The robot with sensor and micro controller, GPS and crank shaft is used to perform the removal of mud. The Robot is attached with crank shaft. Here GPS is used to detect the particular location or square or round area, which sends the location to the micro controller. This micro controller receives this signal and controls the operation of robot arm. As the robot arm has crank which attached with right angle to a shaft by which reciprocating motion is imparted to or received from the shaft. The crank shaft is used to convert the circular motion into reciprocating motion or square motion and vice versa. By using of this robot we can remove the sand or mud in particular circular or square area for constructing a pillar or column.

| (51) International classification | :B23K26/14 |
| (31) Priority Document No | :NA |
| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
| (86) International Application No | :NA |
| (87) International Publication No | :NA |
| (61) Patent of Addition to Application Number | :NA |
| (62) Divisional to Application Number | :NA |
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| (72) Name of Inventor | 1) P. Dayakar |
| 2) K. Anitha |
| 3) P. Mugilvani |
| 4) S. Venkat Raman |

No. of Pages: 7 No. of Claims: 1
**Title of the invention:** WIRELESS MIKE ATTACHED WITH RECORDING SYSTEM

| (51) International classification | :H04N7/18 |
| (31) Priority Document No | :NA |
| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
| (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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| (72) Name of Inventor : | 1)K. Subbulakshmi 2)S. Saravana 3)G. Kanagavalli 4)R. Mohan Raj |

| (57) Abstract : | ABSTRACT WIRELESS MIKE ATTACHED WITH RECORDING SYSTEM This invention system is related to a wireless mike. This invention is used to record the voice automatically in a wireless mike. This is accomplished by a circuit by using analog to digital converter. The voice signal is converted on to series of digital signal (0’s & 1’s) and then the amplifier stores this signal as series of binary data of the amplifier of the audio signal at equal time interval. There is no requirement of separate amplifier, as a small speaker is in-built. After speaking with this microphone we can replay these voice and also we can save this voice. |

No. of Pages : 7 No. of Claims : 2
Title of the invention: FLEXIBLE FULL COVER VEHICLE WHEEL WITH SUSPENSION SYSTEM OF WHEEL COVER BODY

Abstract:
ABSTRACT FLEXIBLE FULL COVER VEHICLE WHEEL WITH SUSPENSION SYSTEM OF WHEEL COVER BODY This invention proposes a novel system and method for reducing the accident during driving a vehicle. In this system the vehicle wheel has one suspension system of wheel cover body. This suspension system has sensor and micro controller and which is act as flexible full cover vehicle wheel. When the wheel is without wheel arc body, it also can move with suspension during drive or pumping. Here the sensor can sense the vehicle wheel out arc body state if any changes are occurring in wheel it can be send the signal to micro controller. This micro controller sends a message to the user or driver.

No. of Pages: 7 No. of Claims: 2
Title of the invention : SELF-WI ROBOT

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Name of Applicant :
1) BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
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Name of Inventor :
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2) J. Dhana Sekar
3) G. Vasumathi

Abstract :
ABSTRACT Self-WI Robot This invention system is related to self-WI robot. The robots will be taking the science to next level. In this project whatever app is downloaded in smart phone on one, that phone is placed on one robot. This robot also has micro controller for controlling purpose, so that we control the robot with another one such as phone or tablet or laptop or computer in robot phone. These robots are used for digital shopping, and also with any online purpose. Here the user can access in any other place just the user will have to put in active mode it can control all the online and digital registration and shopping notification, so that the user can easily control our all digital linked project. This is very user friendly. It is used to give more security to our online transaction.

No. of Pages : 6 No. of Claims : 2
**Title of the invention:** Automatic Tap with IR Sensor Block

**Abstract:**

Automatic Tap with IR sensor block. This invention system is related to and Automatic tap to allow and stop the flow of water. IR sensor, 555 timers IC, microcontroller, solenoid valve are used to construct the auto tap on/off system. Here the IR sensor is used to detect the user’s hand motion, there are three parts available transmitter, receiver, controller. The IR sensor rays are continuously emitted by the transmitter and fall on the receiver, it gives the high output pulse but as soon as the hand or object are detected by the IR sensor the output goes low the very instant. This low pulse is fed to the IC via the timing capacitor which triggers the mono stable mode. The IR sensor is able to detect if the object is present or not. If an object is present it will send the sensing signal to timer which is to allow the flow of water, and whereas if there is no object is detected, it does not permit the flow of water.

No. of Pages: 7  No. of Claims: 2
Title of the invention: DISPLA
(51) International classification : H04N21/47
(31) Priority Document No : NA
(32) Priority Date : NA
(33) Name of priority country : NA
(86) International Application No : 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

Abstract:
ABSTRACT Displaying message from voice signal without typing Manual typing takes more time to type and to display the message on the notice board. So that we introducing the new technology, it allows the user to display the messages or notices to LCD display without typing manually. This invention system has a micro controller, transducer, and LCD display components to design a circuit. Here the user may speak out the message through their android phone. The message is then transferred or displayed on the screen wirelessly. Here LCD displays the messages and is also connected with micro controller and the micro controller receives the message from the user via the IOT (internet of things).

No. of Pages : 7 No. of Claims : 2
The Patent Office Journal No. 49/2019 Dated 06/12/2019

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<td>(22) Date of filing of Application : 29/11/2019</td>
<td>(43) Publication Date : 06/12/2019</td>
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(54) Title of the invention : E-SKATE BOARD WITH PRESSURE SENSING

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(57) Abstract :
ABSTRACT E-Skate board with pressure sensing This invention system is related to a Skate board fitted with motorized wheels fixed with a belt pulley arrangement powered by an electric motor. The motor is driven by a high capacity light weight battery mounted under the board. The board consists of pressure transducers have a sensing element of constant area and respond to force applied to this area by fluid pressure. This sensor is attached with a micro controller. This micro controller detects the pressure level. Here we use piezoelectric sensor and voltmeter and battery and led light to design a circuit for power generation and power supply.

No. of Pages : 7 No. of Claims : 1
The present invention is about formulating vitamin A and tea tree oil cream, using shea butter as a cream base, for effective treatment of acne. Vitamin A derivatives are first choice of drugs for treating acne. The efficacy of the formulations is increased by additional antimicrobial activity of tea tree oil and UV protective (SPF-6) activity of shea butter, which is also rich in vitamin A, E & F for the effective treatment of acne. This anti-acne cream is prepared by using vitamin A and tea tree oil as active ingredients, shea butter and stearic acid as bases and Span 60 & Tween 80 as emulsifiers by using fusion technique. Shea butter, stearic acid, Span 60 and cetyl alcohol are melted continuously until the temperature of the mixture reaches to 70°C and vitamin A is added to the above hot melted mixture. Tween 80, sorbitol and potassium hydroxide (KOH) are dissolved in the purified water and heated up to 70°C. Gradually warm aqueous solution is added to the melted mixture under continuous stirring till the temperature falls to 30°C. Tea tree oil and lavender oil along with perfume are added with continuous stirring until it is congealed.

No. of Pages : 11
No. of Claims : 10
The present invention relates to preparation of topical cream by incorporating a corticosteroid and natural medicinal seed oil for the treatment of vitiligo. In the present invention the pharmaceutical topical cream comprises a corticosteroid clobetasol propionate which is used as anti inflammatory agent and also used as first line treatment choice in vitiligo and another effective natural medicinal seed oil kalonji oil (Nigella sativa seed oil) is also incorporated into cream base. Oil phase comprising clobetasol propionate and kalonji oil along with fatty and/or waxy and/or oil materials, oil soluble emulsifier and emollient were heated to 70°C along with a preservative, antioxidants and chelating agents. The aqueous phase ingredients along with water soluble emulsifiers, humectant, preservative and water were heated to 70°C. The heated aqueous phase was added slowly to the heated oil phase and mixed under the mechanical stirrer until it is congealed.

No. of Pages: 12 No. of Claims: 10
The present invention relates to the preparation of clobetasol propionate topical ointments by incorporating the natural medicinal seed oil namely kalonji oil for the treatment of vitiligo. Topical ointment compositions useful for the treatment of vitiligo were prepared by incorporating primary ingredients such as clobetasol propionate which is used as anti-inflammatory agent and also used as first line therapy in vitiligo and kalonji oil (Nigella sativa seed oil). Oil phase comprising an anti-inflammatory agent, clobetasol propionate and natural medicinal seed oil namely kalonji oil/Nigella sativa seed oil, along with ointment base including oil and/or fatty and/or waxy materials, oil soluble emulsifier were heated to 70°C along with a preservative. The aqueous phase ingredients along with water soluble emulsifiers, humectant, preservative and water were heated to 70°C. The heated aqueous phase was added slowly to the heated oil phase and mixed under the mechanical stirrer until it is congealed.

No. of Pages : 12  No. of Claims : 9
Title of the invention: DEVICE AND METHOD FOR CONTROLLING DRUG ADMINISTRATION

The present invention discloses a device (4,10,114,109) for controlling drug administration to a user, the device comprising a plurality of indicator lights ((2a,2b), (11a-11d), (119), (118)) configured to emit plurality of colored wavelengths of lights based on a type of drug, and a comparison of one or more health parameters associated with the user with one or more threshold values associated with the one or more health parameters; and a microprocessor (3) configured to receive commands from an server (6, 21) to operate the plurality of indicator lights, wherein the engine is configured to compare the one or more health parameters associated with the user in real-time with the one or more threshold values stored in the server; and wherein the microprocessor configured to operate the plurality of indicator lights based on the received commands. See FIG. 5

No. of Pages : 30 No. of Claims : 10
AN INPUT DEVICE FOR AUGMENTED REALITY, VIRTUAL REALITY, SMART GLASSES, SMART PHONES, COMPUTER

The present invention relates to an input device for augmented reality, virtual reality, smart glasses, and computer. The input device (100) includes a side one (102), a side two (104), a side three (106), a side four (108), a side five (110), a side six (112), a microcontroller (114), a gyroscope sensor (116), a wireless module (118), a vibrator module (173) and a battery (120). All the sides of the input device (100) are attached to each other to form a cubical hollow structure in the three-dimensional cartesian coordinate. The battery (120) is used to power the microcontroller (114), the gyroscope (116) and the wireless module (118). The microcontroller (114) controls all the electronic components inside the input device (100). The wireless module (118) connects the input device (100) to the augmented reality device, virtual reality device, smart glasses device, smart phone device, and computer device. The microcontroller (114) gets input signal from each keypad of the activated side of the input device (100) and sends the signal to the augmented reality device, smart phone device, virtual reality device, smart glasses device, and computer device. Fig. 7

No. of Pages: 34  No. of Claims: 10
**Title of the invention**: ECO-FRIENDLY BIO-BRICK AND PROCESS OF PREPARATION THEREOF

| (51) International classification          | :C01B32/05 |
| (31) Priority Document No                | :NA        |
| (32) Priority Date                       | :NA        |
| (33) Name of priority country            | :NA        |
| (86) International Application No Filing Date | :NA    |
| (87) International Publication No        | :NA        |
| (61) Patent of Addition to Application Number Filing Date | :NA |
| (62) Divisional to Application Number Filing Date | :NA |

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**Name of Inventor**: 1) Priyabrata Rautray 2) Avik Roy 3) Nibedit Dey

**Abstract**: An eco-friendly bio-brick is disclosed. In an embodiment, the eco-friendly bio-brick comprises a first component, a second component, and a third component in a ratio of 2:1:1 by weight, said first component being a lime-based slurry, said second component being dry agro-waste, and said third component being stone dust. The size of said second component is less than or equal to 15 mm, and said first component is made from 400 gm of lime with 400 ml of water. The disclosed bricks: reduce agro-waste burning; reduce pollution and its health hazards; improve the economic condition of farmers; create grassroots jobs; are a sustainable building material; act as a carbon sink, lowering a country’s carbon footprint; are a good fire retardant; and offer good heat insulation.

No. of Pages: 20  No. of Claims: 16
The present invention discloses a tiltable staining rack with slide holding clips for securely holding a slide and tilting for rinsing and decolorisation thereby preventing breakage of the slide and staining of hands. The tiltable staining rack with slide holding clips of the present invention comprises of an elongated oval shaped staining rod comprising of a horizontal section at the middle and curvature section at both ends and characterized in plurality of slide holding clips and a handle. The plurality of slide holding clips are integrated with the staining rod on both side at the horizontal section for securing the slides thereby preventing damage of the slide. The handle comprises of an horizontal part and a vertical part and the horizontal part is integrated with the staining rod on one end at the curvature section for lifting the staining rack from one side and to tilt while decolorisation and rinsing steps without touching the slide, thereby preventing staining of hands.
The invention relates to an efficient microbial fuel cell. More particularly, the invention relates to enhancing the potential of electrodes to harness sustainable electricity. Multi walled Carbon Nano Tubes (CNTs) coated stainless steel mesh-200 (SSM) electrode was prepared. SEM images of CNT coating and bacterial colonies on electrodes are presented in support of the findings. This study is first in its kind, involving Electrochemical Impedance Spectroscopic studies in a cow-dung fed Microbial fuel cells. It is demonstrated that CNT coated SSM electrode is the better choice for cow dung slurry-fed Microbial fuel cell to harness sustained electricity generation.

No. of Pages : 27 No. of Claims : 5
METHOD OF DEVISING PROCESS PARAMETERS IN WEDM

Abstract:
Wire cut Electrical Discharge Machine (WEDM) is an unconventional machining process which is widely used to produce a precise, complex irregular shaped job with internal cavities and difficult to machine electrically conductive materials. The WEDM process is governed by the various process parameters and the settings of the process parameters were done on the trial and error basis: which increases the job set up time and requires an operator with a high skill set. To overcome this limitation, a mathematical model is developed for relating the input process parameters and work-piece setting parameters of the WEDM process. Validation of the values has been done by setting workpiece thickness, wire wear rate and time taken for machining parameters are fed into the mathematical equations by which we can obtain the setting values of the process parameters. The results reveal that the proposed ANN algorithm paves way for the reduction in setup time of the workpiece on the WEDM including the machining time there is no downtime in the WEDM due to the tool wire breakage and also leads to a better surface finish of the workpiece. The outcomes of the research work lead to an increase in productivity, employability, machining quality and profit.

No. of Pages: 6 No. of Claims: 5
**Title of the invention:** SYSTEM AND METHOD FOR GENERATING AND PROVIDING ELECTRONIC TOKENS TO USERS IN REAL-TIME

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**Abstract:**
Exemplary embodiments of the present disclosure are directed towards a method for generating and providing electronic tokens by computing devices connected to a network, comprising: placing electronic tokens on a uniform resource locator (URL) location after first user agrees for the electronic tokens on the first computing device, the URL located in a static machine readable code, machine readable code encoding URL information and placed on placard; scanning static machine readable code with second token facilitation module from placard, second token facilitation module accesses URL location via predefined web application programming interfaces and enabling second user to download electronic tokens on second computing device; implementing one time electronic token download by second token facilitation module to ensure that electronic token is not be downloaded multiple times on second computing device; and using electronic tokens by second token facilitation module to create reports for second user based on purchases of second user. FIG. 8

No. of Pages : 57 No. of Claims : 2
The various embodiments of the present invention disclose a helmet with a modular air purification and circulation system. The air purification and circulation system channel the purified air to the front area of the helmet, thereby providing a clean air curtain. The present invention comprises a base helmet and an attachable unit, which are snap-fit to form the helmet. The attachable unit is designed to house a plurality of modules, such as air purification unit, communication module, sensor module, air-conditioning unit and a heads-up display unit. The present invention also comprises a user device, which is configured to wirelessly communicate with the plurality of modules in the attachable unit. The user device is also configured to receive information from the sensor module via Bluetooth, NFC or any other communication mechanism and provide pollution or temperature related alerts to a wearer of the protective headgear. Fig 1.
Abstract

A continuous casting process for producing metal matrix nano composite consists of two material phases, i.e. a metal or alloys matrix phase and a dispersed phase in the matrix, comprising the steps of: preparing and feeding molten metal or metal alloy into a pipe continuously and simultaneously feeding dispersed particles into the same pipe from a high frequency vibrating sieve where-in the mixing is also subjected to ultrasonic vibration. Then said mixture of liquid melt and particles is allowed to vibrate during secondary mixing, which is subsequently poured into a mold for final casting. The entire process consists of four stages i.e. feeding, primary mixing, secondary mixing, solidification or casting. The process continues without any interruption and is mostly suitable for mass production of metal matrix composite in industries.

No. of Pages: 20
No. of Claims: 6
A system generates dual-chirped arbitrary microwave waveform in pre-defined microwave frequency band. The system includes tunable laser, erbium doped fiber amplifier (EDFA), RF signal generator, Mach-Zehnder modulator (MZM), optical circulator, filter and dispersion compensator, optical spectrum analyzer, photo detector, and electrical spectrum analyzer. The tunable laser provides first pre-determined measure of continuous optical wave. The EDFA provides second pre-determined measure of continuous optical wave. The RF signal generator transmits RF signal of six gigahertz. The MZM modulates frequency of optical wave provided by tunable laser, and EDFA in accordance with instantaneous frequency of RF signal feeded at the RF port. The optical circulator receives modulated frequency from MZM. The spectral pulse shaper (LCFBG) reflect different wavelengths according to the spacing between Bragg gratings and all are referenced around 1550 nanometer central wavelength optical carrier, meanwhile transmits rest of the optical signal. The optical spectrum analyzer analyzes received optical signals. The photo detector converts optical signal to electrical signal. The electrical spectrum analyzer analyzes electrical signal to display analyzed signal intensity, power spectral density and phase of electrical signal.
Abstract:
Super Narrow beam generation in electromagnetic wave transmission has become a necessity in variety of applications in Radars and space diversity based communication. Sparse arrays can generate very narrow beams but are impractical due to their characteristics of grating lobes and high sidelobes. The method presented here uses sparse array elements to be appropriately spaced, using the proposed space augmentation method, such that grating lobes and sidelobes are sufficiently suppressed to make sparse arrays practically usable for super-narrow beam generation.

No. of Pages: 10
No. of Claims: 3
Ordnance Factory Badmal (OFBL) is engaged in manufacturing of Filled Shell 155mm HE ERFB M1A4 BT ammunition through Pour Filling Method. Empty Shells are preheated to a certain temperature in preheating oven and taken for filling with explosive mixture i.e. 99% TNT Spl Grade and 1% additives (NC, HNS & PNT). TNT is melted in the Melter to a specified temperature and Additives are mixed with the Main Explosive i.e. TNT gradually in the Melter and stirred in the Melter. Finally both are mixed, melted and filled into the Shells with the help of Pouring Unit. After Filling of Shells with molten Explosive Mixture, shells are subjected to Hot Probing to a predefined Probing Cycle at Hot Probing Station to achieve directional solidification of explosive mixture and avoid filling defect. After Probing Cycle, Filled Shells are subjected to Natural cooling at Room Temperature for certain period. The Explosive Filling Processes of Shell 155mm HE ERFB M1A4 BT has been established in a plant otherwise suitable for Shell 155mm HE M1 07. Thus, OFBL has indigenized the process of filling of Shell 155mm HE ERFB M1A4 BT (Ref: TOT Doc. No. 13-1320-2452-0-41005, Issue dtd. Feb'1998) by modifying various parameters defined at our end. The manufacturing process adopted by OFBL is unique and effective in producing defect free Filled Shell 155mm HE ERFB M1 A4 BT.

No. of Pages : 5 No. of Claims : 2
(57) Abstract:
The present invention relates to a polyphase brushless motor capable of running as a series, shunt and compound motor comprising in combination i) a motor shaft connected to the main portion carrying two stators thereon; ii) an exciter for polyphase power supply system; iii) each one of the said stators having polyphase winding; iv) part of the motor under each stator carrying polyphase winding, the number of phases and the number of poles are equal in number in each of the stator and rotor windings; (v) motor equipped with slip ring windings, slip rings of the motor connected with the slip rings of the exciter or alternatively both the motor and exciter may have a common slip ring winding; (vi) for squirrel cage windings, a single common rotor winding operates under the stator windings of the motor and exciter and (vii) the stator winding of the motor and exciter are so connected that current flowing through these windings have the same phase sequence producing magnetic fields rotating in the same direction.

No. of Pages : 22 No. of Claims : 7
The present invention provides a novel sand filtration system for treatment of wastewater and method thereof. The sand filter includes multi-columns thus allowing procurement of different quality water at the same time. The desired quality water from sand filter can be obtained at any preliminary stage of operation. The multi-column filtration set up has the ability to reduce the turbidity of wastewater below the minimum standard prescribed by WHO i.e. one NTU (that is essential for groundwater recharging). The sand filtration unit serves as an efficient and viable means of treating wastewater. Additionally, the multi-column sand filter can be cleaned without disrupting its operation in a column-wise manner.

No. of Pages : 19 No. of Claims : 8
The Patent Office Journal No. 49/2019 Dated 06/12/2019

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application : 03/10/2019
(21) Application No. 201931039920 A
(43) Publication Date : 06/12/2019

(54) Title of the invention : LOW POWER AND HIGH SPEED FLOATING POINT DIVIDER

(57) Abstract:
The present invention describes custom designed Floating Point Divider algorithm according to IEEE-754 standard 32-bit single precision format using Verilog on Xilinx ISE 13.2. The salient feature of the proposed methodology is its simplicity and elegance in evaluating the mantissa and the exponent, yielding better computational speed, better power efficiency and consequently enhancing the performance of the processor having this floating point divider scheme. For the computation of the sign part of the division, the traditional method have been used. Hence the core objective is to integrate this suggested scheme of the floating point divider on FPGA using Verilog Hardware Description Language and to ascertain our claim of its being fast, effective and power efficient simultaneously. Most specifically, the system is configured with five ports which are also consisting of four input and one output ports. The first two input ports intakes two numbers in IEEE-754 standard 32-bit single precision format as DIVIDEND and DIVISOR to be operated in division process and to produce the desired quotient (RESULT) consequently. The other two inputs CLOCK and RESET are utilized to synchronize as well as to reset and restart the system respectively. The divider will be implemented through FPGA board and the hardware a reconfigurable structure along with its economic benefits while also maintaining a competent clock speed and a reasonable amount of low power consumption. Consequently, this developed arrangement upholds the dual advantage of superior output generation speed while keeping in mind the cost cutting obligations of the hardware system as well along with its capability to work in an environment with power constraints.

No. of Pages : 29 No. of Claims : 10
Publication After 18 Months:

The following Patent Applications have been published under Section 11A (3) of The Patents (Amendment) Act, 2005. Any Person may file representation by way of opposition to the Controller of Patents at the appropriate office against the grant of the patent in the prescribed manner under section 25(1) of the Patents (Amendment) Act, 2005 read with the rule 55 of The Patents (Amendment) Rules, 2006:

(12) PATENT APPLICATION PUBLICATION (21) Application No.201711042921 A
(19) INDIA
(22) Date of filing of Application :30/05/2018
(43) Publication Date : 06/12/2019

(54) Title of the invention : PROCESS FOR PREPARATION OF PYRAZOLE DERIVATIVES

| (51) International classification | :C07D231/14 |
| (31) Priority Document No | :NA |
| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
| (86) International Application No | :NA |
| (87) International Publication No | :NA |
| (61) Patent of Addition to Application Number | :NA |
| (62) Divisional to Application Number | :NA |

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(57) Abstract :
The present invention provides a process for preparation of pyrazole derivatives of formula I and formula II. I RSTVR2 NN V Formula I Formula II wherein R1 represents an alkyl group having 1 to 6 carbon atoms optionally substituted by halogen, a cycloalkyl group having 3 to 6 carbon atoms or an arylalkyl group which is optionally substituted; R2 represents a hydrogen, alkyl group having 1 to 6 carbon atoms, a cycloalkyl group having 3 to 6 carbon atoms or an arylalkyl group which is optionally substituted, or an aryl group which is optionally substituted; R3 represents an alkyl group having 1 to 6 carbon atoms, which is substituted by at least one halogen atom.

No. of Pages : 17 No. of Claims : 8
**Title of the invention:** SOLAR POWERED COOLING APPARATUS

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**Name of Applicant:**
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**Name of Inventor:**
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**Abstract:**
Solar powered refrigeration unit for cold storage or freezer for perishables such as milk or fruits/vegetable having a thermal storage to provide cooling during the times when solar power is not available is disclosed herein. The thermal storage device ensures relatively uniform rate of cooling of the perishables, even if the solar power is fluctuating throughout the day. In order to achieve constant cooling load, a secondary loop of coolant is utilized where a pump circulates a coolant between the thermal storage device (130) and the chamber (140) having cooled perishables such as milk or fruits/vegetables (or eggs, meat, fish, flowers etc.). The innovation includes having arrangement of different components such as solar system, refrigeration system and thermal storage system in such a way that the maximum use of solar energy can be accomplished.
The present disclosure relates to a solar drier cum space heating system (100). The solar drier cum space heating system includes a plurality of heat pipe based evacuated solar collectors (101) configured to collect and deliver solar heat, a PCM based thermal storage tank (102c) configured to receive heat from the solar collectors (101), and a drying chamber (102) including a plurality of trays (102b) for containing articles to be dried. The thermal storage tank (102c) is detachably placed below the plurality of trays (102b) such that the thermal storage tank (102c) is taken out from the drying chamber (102) for placing inside a room (103) where space heating is required. Thus, the system can be operated in dual mode i.e. for drying as well as for space heating, thus increasing its overall utility.
A novel topical composition having a unique combination of ingredients, and weight percentages thereof, for use as effective carrier vehicles for one or a plurality of active agents such as NSAIDs that is to be applied topically to the skin of a human being or animal. The present invention specifically relates to Aceclofenac (alone or in a combination with one or more other active agents) topical composition, preferably, a non-aqueous topical composition useful for treatment of pain, rheumatoid arthritis, osteoarthritis and other related conditions.
The present invention relates to a simple, cost effective cyclic process for the production of habit modified free flowing NaCl crystals (a-alanine yields octahedron whereas P-alanine yields rhombic dodecahedron crystals). The said process comprising steps of adding different isomers of alanine (a-alanine and p-alanine) of concentration ranging between 20 to 50% to the saturated brine by weight. For the first time it is observed that the isomers of a single additive can give two different morphology of rock-salt (NaCl) crystals, octahedron on addition of a-alanine and rhombic dodecahedron crystals with P-alanine. This process can be recycled without any loss of efficiency.
The invention described herein relates to the process for preparing substituted quinolines with formula I and methods for inhibition of cellular as well as recombinant human Topoisomerase I (Topi) using gel based plasmid DNA relaxation assays and cleavage assays using substituted quinolines. These compounds possess the ability to increase the stability of the drug-DNA-Topi ternary complex. Thus, these compounds may act as topoisomerase I poisons. The substituted quinolines described are highly stable at pH 7.4 in plasma and the aqueous solubility of the compounds was good at 7.4 pH.
Title of the invention: COSMETIC COMPOSITION WITH VISIBLE OIL DROPLETS

Abstract:
The present invention relates to a cosmetic composition in the form of a stable oil-in-water dispersion, comprising: a) oil droplets comprising at least one oil and at least one pigment; and b) a continuous aqueous phase comprising at least one polymer chosen from a copolymer of ammonium acryloyldimethyltaurate, dimethylacrylamide, lauryl methacrylate and laureth-4 methacrylate, crosslinked with trimethylolpropane triacrylate; dehydroxanthan gum; and copolymers comprising at least one (meth)acrylate monomer and at least one monomer which is an ester of methacrylic acid with an ethoxylated fatty alcohol having a fatty chain of 15 to 30 carbon atoms, wherein said composition is substantially free from any surfactant.

No. of Pages: 20 No. of Claims: 12
The present invention relates to industrial waste from toothpaste and paper industry sludge, used to produce alternative pavement and road material. The present invention further relates to Hot mix asphalt, as an alternate pavement and road material, comprising modified bitumen, aggregates, and fillers, wherein modified bitumen, used for binding of aggregates, is modified by adding lime sludge from toothpaste and paper industry to unmodified bitumen. The present invention also relates to a method of preparation of hot asphalt mix, with improved characteristics and performance.

No. of Pages: 30 No. of Claims: 14
The present invention provides a bank angle sensor for motor vehicles. More specifically, the invention provides a bank angle sensor with inbuilt hall sensor and mechanical failsafe mechanism to switch off the engine if the vehicle inclines from a prescribed limit and tends to tip over.

No. of Pages : 21  No. of Claims : 9
The present invention relates to a system for extracting water from atmospheric air comprising a regeneration unit adapted to store a composite desiccant material, the composite desiccant material being adapted to absorb water vapours from the atmospheric air; a Scheffler reflector to collect and focus a solar intensity at a predetermined fixed point on the regeneration unit to convert the absorbed water vapours in the composite desiccant material into water vapours, wherein a position of the regeneration unit is fixed with respect to the Scheffler reflector; a condensation tube fixedly mounted on a top of the regeneration unit to condense the water vapours into water droplets, the condensation tube being made of copper and having a round shape; and a collection container in fluid communication with the condensation tube to collect the water droplets from the condensation tube.
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**Abstract:**

Present invention discloses an electronic device (27) to convert manual voltage stabilizer into automatic wherein the metallic terminal strip (17) for connection with autotransformer (29), potential divider circuit unit (25), microcontroller unit (20) and the toggle switch (19), are arranged in a logical way to initially detect and save the input output voltage-ratio in the microcontroller unit (20) and then activating/deactivating appropriate relay as per the initial saved voltage ratio to keep the output voltage in desired range.

No. of Pages : 25  No. of Claims : 10
Title of the invention: AIR INTAKE UNIT FOR AN AIRCRAFT ENGINE AND PROVIDED WITH AN AIR FILTER AND WITH AN AIR FILTER BYPASS DUCT

Abstract:
An air intake unit (5) for an engine (2) of an aircraft (1) and having: a housing (6), inside which a plenum (7) is defined, which can be connected to the engine (2) of the aircraft (1); a main intake opening (8); an air filter (9) which engages the main intake opening (8); a bypass intake opening (10); a shutter device (11), which is coupled to the bypass intake opening (10) and has two partitions (13, 14), which are mounted so as to rotate around respective rotation axes (15, 16) parallel to and spaced apart from one another; and an actuator (12), which moves the shutter device (11) between a closed position and an open position. In the open position of the shutter device (11), an upper partition (13) is arranged transversely to the wall (17) of the housing (6) and in a central area of the bypass intake opening (10), and a lower partition (14) is arranged parallel to the wall (17) of the housing (6) and overlaps said wall (17). Main figure: Figure 5

No. of Pages: 30 No. of Claims: 14
DOVETAIL-ATTACHMENT FLOATING MOUNTING ASSEMBLY FOR SOLAR PANELS


No. of Pages : 27 No. of Claims : 9
A system for removing dirt from laundry inside a washing machine (100), the system comprising a receptacle (102) for receiving laundry, a motor (202) adapted to rotate the receptacle (102) in clockwise and anti-clockwise direction in order to agitate the water present in the receptacle (102), water guides (208) provided on the internal periphery of the receptacle (102), a brush structure (302) with bristles disposed on the water guides (208); and a lint filtration unit (304) coupled on to the internal periphery of the receptacle (102) in order to collect the lint generated during the wash cycle. Further, the bristles of the brush structure (302) are distributed over an internal surface of the receptacle (102) such that bristles allows the critical portion of the laundry to be rubbed against the bristles to remove dirt and stains from the laundry.

No. of Pages : 35 No. of Claims : 25
Title of the invention: SADDLE TYPE VEHICLE

Abstract:
A saddle type vehicle of an embodiment includes a rear fender (30) configured to cover a rear section of a rear wheel (4), a support member (40) extending from a swing arm (6) toward a rear side of the vehicle and configured to support the rear fender (30), and guard members (46, 50, 60) attached to the support member (40) and configured to cover a side surface of the rear wheel (4).

No. of Pages: 45 No. of Claims: 11
Abstract:
The conventional mechanical lock always needs physical key to access the locking system. If any problem in key or key missing, it may create problem to genuine user for access. In this era of digitization and automation carrying the physical key may arise embarrassing situation in personal life. This control unit of electrical door lock is basically IoT based, where a person can open the door lock through the mobile application from anywhere in the world. It is mainly a keyless locking system where an user can operate the lock with an unique username and password. When a visitor comes then user can give the entry access to home by unlocking door through mobile application. The main control unit of door lock controller consists of a microprocessor and Wi-Fi module for accessing internet, there is also a power module to drive the electronics system and electromagnetic valve of electrical lock.

No. of Pages : 8 No. of Claims : 6
The present disclosure discloses a 3D stacked multifunctional flexible sensor device comprising a first substrate of graphene (Gr)-based polyvinylidene fluoride (PVDF) film (Gr/PVDF film); a second substrate of zinc oxide grown on Gr/PVDF film to obtain a Gr/PVDF/ZnO film, wherein the second substrate is vertically stacked on the first substrate, and wherein the second substrate is fabricated by hydrothermally growing two dimensional (2D) ZnO, over Gr/PVDF film by masking a portion of Gr/PVDF film; a third substrate of conductive material sandwiched between the first substrate and the second substrate; and at least one polyimide tape disposed between the first substrate and the second substrate, and between the second substrate and the third substrate. The disclosure also provides a method for fabricating the 3D stacked multifunctional flexible sensor device.
The present invention provides a system and a method for engine efficiency enhancement and pollution reduction for internal combustion engines driven vehicles utilizing Petrol or Diesel or Compressed Natural Gas (CNG) or Bio-Diesel, or Bio Gas as fuels. The system comprises a control unit which produces a potential and an opposite high waved voltage, which is applied across an ion generator. The ion generator, containing water produces a gaseous mixture of disintegrated hydrogen and oxygen gas when applied with the voltage from control unit. The system provides hydrogen as additional carbon-free fuel. Additional oxygen promotes the proper burning of both fossil fuel and hydrogen in the engine, thus increases the efficiency of engine form 10 to 45% and significantly reduces the pollutants emission from the exhaust. The gaseous mixture combusts with fossil fuel, in an engine cylinder, which enhances the engine efficiency and reduces pollution emission from an exhaust.

No. of Pages : 33 No. of Claims : 20
The present invention provides synthesis of Al3+ doped BiFe03 nano-ceramics having improved electrical properties with low leakage current density. Pure BiFeCh (BFO) and Al doped BFO are synthesized via citrate precursor method and sintered at 500°C for two hours. Effect of Al doping on the structural, optical, electrical, dielectric and magnetic properties are investigated. X-ray diffractions (XRD) confirm the distorted rhombohedral structure without any merging of peaks which indicates no structural transformation. Average crystallite size is found to be in the range 28-39 nm. Field emission scanning electron microscopy (FESEM) images illustrate the dense, agglomerated, spherically shaped with reduced grain size nanoparticles. Increased value of dielectric constant with low dielectric tangent loss is observed for the Al doped BFO samples. The value of dielectric constant is found to be 101 kHz for x=0.1 samples. Temperature dependent dielectric constant shows a dielectric anomaly, indicating the antiferromagnetic transition. The remnant polarization and the corresponding coercive field for x=0.1 is found to be 0.0625|C/cm² and 56.154 kV/cm at an operating voltage of 1000 V.
The present invention provides exterior grade compact laminate prepared from cellulose extracted from leaves of plant Cassia tora and blended with paddy straw waste. Paddy waste was blended with Cellulose obtained from Cellulose tora leaves in a blender and Composite Sheet is prepared by compression moulding technique and evaluated for various physico mechanical properties. The paddy sheet according to the present invention could be used in replacing wood in various applications i.e. in building and construction, partition panel, in housing exterior applications, flooring, roofing etc. Utilization of paddy waste and Cassia tora waste leaves is cost effective and environmental friendly. The composite is fire-retardant and moisture-resistant.
The present invention relates to a novel reusable and stable super-hydrophobic/ super-oleophilic carbon based nanocomposite for efficient separation of oils from oil-water surface or mixture. The nanocomposite is based on magnetic nanoparticles and adsorbent, wherein magnetic nanoparticles are tightly attached on the surface of adsorbent to obtain a low-density stable magnetic nanocomposite which displays both magnetic character as well as adsorbent characteristics. The invention also relates to a magnetic separation process for separating oil from water. The novel nanocomposite as synthesized can be used to remove oils from oil-water surface or mixture and can be magnetically separated, which makes these magnetic carbon nanocomposite very efficient to remove oil spilled over water surface on a large area. The removed oil can be easily extracted from the carbon nanocomposite through squeezing the porous structure and the nanocomposite can be reused for oil removal from oil-water mixture. The present invention also provides a method for the development of such efficient adsorbent nanocomposite using a unique method which enables decoration of 3D nano-structured adsorbent with magnetic nanoparticles to develop low-density, stable magnetic nanocomposite materials.
A computing system architecture includes a token generator communicable with a client token agent. The client token agent is communicable with a client database access agent. A database management system is communicable with the token agent. The database management system is communicable with the client database access agent. A client authorization management system is communicable with the database management system. The client authorization management system stores a list of authorized operations for a client. The list of authorized operations is configured to be changeable during a client login session.
The present invention discloses a fiber optic cable (500B) with a plurality of bendable optic fiber ribbon (540B). The fiber optic cable with bendable ribbons increases the total fiber counts compared to conventional optic fiber ribbon cables by eliminating empty spaces of the conventional cables due to stacking of the ribbons in the cross-sectionally circular shape of the loose tubes and the cable jacket. According to an embodiment of the present invention, a bendable ribbon (100) will further allow ribbon labeling on a flat side of the ribbon.
The present invention generally relates to method of generation of unique digital code for identification of manufactured and/or consumer products and thereafter utilizing said unique identification code for verification of the product, particularly by using web based devices and data-communication means.

No. of Pages : 1 No. of Claims : 8
The present invention discloses an improved process for production of oligosaccharides from agar using novel psychrophilic bacteria isolated from Himalayas. The oligosaccharides are produced from agar in a simple, eco-friendly and economical manner. Agar is degraded into oligosaccharides by using a novel psychrophilic bacteria Pseudomonas frederiksbergensis strain D thus eliminating the need of toxic chemicals, costly enzymes and sophisticated equipment for production of oligosaccharides. The process provides an additional benefit as it can be performed at room temperature over a wide temperature range varying between 4°C to 30°C optimally 25°C. In addition, oligosaccharides produced are purified from the medium by using a dialysis which eliminates the need for centrifugation. The process can be used in food and pharmaceutical industries for large scale production of oligosaccharides in a very simple, eco-friendly and economical manner.
A gear shifting device is disclosed. The gear shifting device comprising a drive side gear shifting means adapted to be connected to a driven side gear shifting means by a rotary transmission belt. The transmission belt is passes through a set of flanges of the drive side gear shifting means and a set of flanges off the driven side gear shifting means. Pressure exerting means are provided with the drive side gear shifting means such that to shift slidable flange of the drive side gear shifting means for shifting the position of the belt and shifting gears as and when required by the user irrespective of the speed of the vehicle (Fig. 3).
The present invention discloses a novel anti-epileptic compound which is very effective in treating refractory epilepsy. The present invention further relates to therapeutically effective dosage of the novel anti-epileptic compound. The novel anti-epileptic compound of the present invention is effective for treating epilepsy by inhibiting transcriptional factor kappa B (NF-KB).

No. of Pages : 19 No. of Claims : 8
The present invention discloses a novel Fluorine and Zinc co-substituted mesoporous hydroxyapatite nanopowder having wide range of applications in orthopedic and dentistry fields e.g. filling of bone voids during orthopedic, traumatology, spine, maxillofacial and dental surgeries, creating coatings on orthopedic and dental implants, restoration of periodontal defects, desensitizing agent in post teeth bleaching, remineralization agent in toothpastes, early carious lesions treatment, drug and gene delivery, etc. The said hydroxyapatite has good stimulating effect on biomineralization process leading to the growth of new bone tissues. The synergistic combination of fluoride ions and zinc ions make the said hydroxyapatite more resistant to acid with enhanced thermal stability, improvement in crystallinity with regular size distribution, osteoblast proliferation, biomineralization and proliferated bone formation, bioactivity and bioresorption.
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<td><strong>Title of the invention:</strong></td>
<td>A NANOCOMPOSITE ELECTROCHEMICAL BIOSENSOR SYSTEM AND USES THEREOF</td>
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<td><strong>Abstract:</strong></td>
<td>The present invention relates to development of LipL32 gene based nanocomposite biosensor for the detection of leptospirosis causing Leptospira interrogans. A nanocomposite using cysteine, poly amido amine and graphene quantum dots (cys-PAMAM-GQD) was fabricated on the surface of a carboxylated multiwalled carbon nanotubes (Nano-Au/c-MWCNTs) gold electrode. The 5-amine labeled LipL32 ssDNA probe was immobilized on to the surface of nanocomposite fabricated electrode and different concentrations of leptospiral ssG-DNA were allowed to hybridize with the immobilized probe. The corresponding electrochemical changes were recorded in the form of CV using methylene blue as redox indicator. The sensor showed 603.8 (µA/cm²)/ng sensitivity and 0.0007 ng/6µl limit of detection (LOD). The surface characterization studies were carried out using FE-SEM.</td>
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This invention relates to a hidden hydraulic runway and methods thereof. The present invention is all about hidden runway under the surface. There has been always a problem of destroying the runways during wars and by doing this half of the problem is solved. As a country citizen we thought of serving our country. To overcome these situations, we thought of making such type of model which can be beneficial for saving runways during wars because air force is one the key to hold wars. So as to provide safety to air force and safety to fighter jets we thought of making such type of model. And we hope that this type of project should be made in reality.
Title of the invention: NONAPEPTIDE OF FORMULA I, PHARMACEUTICAL COMPOSITIONS AND METHODS FOR PREPARATION THEREOF

Abstract:
Microtubules play crucial role in maintaining the shape and function of neurons. During progression of Alzheimers disease (AD), severe destabilization of microtubule occurs, which leads to the permanent disruption of signal transduction process and memory loss. Thus, microtubule stabilization is one of the key requirements for the treatment of AD. Taxol, a microtubule stabilizing anti-cancer drug has been considered as potential anti-AD drug, which was clinically unsuccessful due to its toxicity. Here, we adopted an innovative strategy for the development of peptide based microtubule stabilizer, considering the taxol binding pocket of P-tubulin and hydrophobic region of amyloid beta (A3). This approach leads to a potential nonapeptide, which strongly binds with taxol pocket of P-tubulin, serves as an excellent microtubule stabilizer, Ap aggregation inhibitor and neuroprotective agent. Further, results revealed that this peptide is non-toxic against both PC 12 derived neurons as well as primary cortical neurons. This novel strategy and discovery of peptide-based microtubule stabilizer will open the door for the development of potential anti-AD therapeutics in near future.
The present invention relates to a dry padded optic fiber ribbons (100) for dry optic fiber cables. The dry padded optic fiber ribbons (100) include a plurality of optic fiber ribbons (10) stacked on top of each other having a cross-sectionally rectangular shape. In addition, the dry padded optic fiber ribbons (100) include a plurality of dry paddings (120). Each dry padding of the plurality of dry paddings (120) has an inner side (121) and an outer side (122). Further, the dry padded optic fiber ribbons (100) include at least one tape (130) wrapping around the plurality of dry paddings (120).
A fitted sheet 100 and a gripping element 112 integrable with fitted sheets is provided. The fitted sheet 100 comprises an elastic band 110 and a plurality of gripping elements 112 secured to a surface of the fitted sheet 100. Each gripping element 112 comprises a horizontal elastic strip 114 and an inverted V shaped elastic segment 116 attached to the horizontal elastic strip 114. At least two arms 116a, 116b of the inverted V shaped segment 116 are attachable diagonally along the surface of the sheet 100 respectively. The horizontal elastic strip 114 is extendable laterally along a surface of the fitted sheet. The resultant force generated by the elastic band 110 and the plurality of gripping elements 112 enhances gripping of the fitted sheet 100 and prevents crumpling and dog ear formation during usage.
Title of the invention: METHOD AND SYSTEM FOR DETECTING AND DISCRIMINATING BIOLOGICAL-AGENTS IN AIR

Abstract:
An apparatus for detection and discrimination between biological-particles within an airstream. The apparatus comprises an arrangement to controllably capture at least a portion of airflow in a region. The chamber comprises a first inlet for receiving the captured air-flow from the arrangement and an array of light emitting diodes (LED) for irradiating the received air-flow to thereby cause fluorescence from particles present within the air-flow. Further, the spectrometer has a photomultiplier-tube (PMT) detector that is arranged orthogonally to the array of LEDs for generating a spectrum based on the emitted-fluorescence. A computing-system is provided for electronically detecting and discriminating between particles based on the generated-spectrum.
Title of the invention: AUTOMATED ARTIFICIAL BREATHING DEVICE

Abstract:
Embodiments of the present invention in general, relates to medical devices, and more particularly, to a portable automated breathing device and system. The present invention provides an electro-mechanical device for automated controlled artificial breathing, in order to replace manual ventilation. The invention has the added advantages of capability to correct artificial breathing during events such as, but not limited to, patient cough, circuit blockage and/or leak.

No. of Pages: 46
No. of Claims: 17
**Title of the invention:** CONDENSERS FOR AIR CONDITIONING SYSTEMS EMPLOYING INTERNAL HEAT EXCHANGERS

| (51) International classification | :F01K27/00 |
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| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
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**Abstract:**

Disclosed is a condenser adapted to be used for an air conditioning system employing an internal heat exchanger. The condenser comprises a first header and a second header comprising a plurality of header separators, wherein the first header and the second header are in a fluidic communication with each other through a plurality of tubes; a plurality of refrigerant flow sections with a refrigerant flow path of the condenser; a subcool region comprising a subcool area within at least one refrigerant flow section, wherein the subcool area is in a range of 3 to 10% of a frontal condenser area; and a free flow area within the plurality of tubes of the subcool region of the at least one refrigerant flow section for the refrigerant flow within the plurality of tubes of the subcool area, wherein the free flow area is in a range of 16 to 34 square millimetres.

No. of Pages : 19
No. of Claims : 10
Title of the invention: BIOLOGICAL DECAFFEINATION OF COFFEE BY HYPER THERMO ALKALIPHILE PARAGEOBACILLUS TOEBII STRAIN SMI AND METHOD THEREOF

Abstract:
The present invention relates to isolation and characterization of the hyper thermophilic caffeine degrading bacteria from water sample of thermal hot spring of Manikaran, Himachal Pradesh, India. A single bacterial colony was isolated from the water sample, which was able to degrade caffeine. The bacterial isolate was identified by 16s rDNA sequencing and named as Parageobacillus toebii strain SMI and submitted to GenBank with accession no MG881878. Parageobacillus toebii strain SMI is a Grams negative, rod shape, alkaline resistant hyper thermophile. P. toebii SMI able to metabolize up to 10g/L of caffeine in solid medium and 8g/L in liquid medium. Apart from caffeine degradation, P. toebii SMI also metabolize other xanthine derivatives such as theophylline (10g/L), theobromine (25g/L) and xanthine (25g/L) and could metabolize these xanthine derivatives as a sole source of carbon. Parageobacillus toebii SMI also produce catalase, lipase and urease enzymes. P.toebii SMI could grow under a wide range of temperature (60-85 °C) and pH (5.5-10.5).

No. of Pages : 29 No. of Claims : 10
This invention relates to the combination tablets dosage form of Telmisartan & Nebivolol hydrochloride dissolution method developed by UV spectrophotometer and validated was according to the ICH guidelines. The any official method of this combination drugs was not available. In this proposed method two commercial brands of drug was used. The simultaneous estimation of Telmisartan & Nebivolol hydrochloride was performed in this proposed method which includes to solving of simultaneous equation. The wavelength of Telmisartan 296nm & 281nm of Nebivolol hydrochloride was used in this simultaneous equation. The dissolution mediums such as O.IN HCl, phosphate buffer, SFG (without enzyme) at various pH was used in this method. The selected proposed dissolution method was SFG dissolution media (without enzyme) 900 ml, speed 75 rpm, USP type II apparatus and temperature at 37 ± 0.5°C and drug release than 85% within 45mints. The optimized proposed method easy to handle and commercially used for the routine quality control checking of Telmisartan & Nebivolol hydrochloride pharmaceutical combine tablets dosage form.
Title of the invention: AN INDICATOR FOR IDENTIFYING NITRIC ACID AND METHODS THEREOF

Abstract:
This present invention relates to a device (12OCT1999) with feature to identify the given liquid is nitric acid with the help of a sensor. This invention also includes a feature to identify the given sample of nitric acid is Concentrated nitric acid or dilute nitric acid. This invention belongs to field of combination of electrical and computer programming.

No. of Pages: 7 No. of Claims: 2
This invention relates to a novel method of dissolution for fast dispersible tablets (FDTS) and uses thereof. Domperidone is an antinauseant and antiemetic drug which is presenting the Domperidone of gastroprokinetic properties. Hence, the goal of the prevailing study becomes to the discriminatory dissolution method developed and validate to the BCS class 2 (domperidone 10 mg) active pharmaceutical drug components. The method was evaluated to the different dissolution medium and different agitation speeds. The discriminatory dissolution testing method distilled water with SLS 5% was a satisfactory result. According to the ICH and FDA guidelines for dissolution method was developed and validated by using different parameters including specificity, accuracy, linearity, precision, robustness was evaluated and acquired results were within the acceptable range. The dissolution rate of FDTS containing DOM-1 and DOM-2 domperidone were determined and confirmed to the discriminatory nature of the method. The Intraday and interday precis results were 1.27% and 1.39% respectively. It can be carried out at some point of formulation development and QC assessment of FDTS for evaluation of the outcomes of system and processing parameters.
The present invention is related to a low-cost fall detection and protection device based on data analytics. The device comprises of an inflatable airbag assembly 5 with a belt for supporting air bag, a battery, a CO2 gas cartridge 3, motion sensor(s) 1 to determine angular motion and acceleration, a relay 3 controlled by a microcontroller 2, a solenoid valve 4 which releases the compressed gas from the gas cartridge 6 into the airbag in case fall is detected. The whole assembly is controlled by a microcontroller 2 included on the same assembly worn by the user.

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The Patent Office Journal No. 49/2019 Dated 06/12/2019
No. of Pages: 15 No. of Claims: 8
A device to monitor and manage a shipment (SH) is disclosed. The device is operatively coupled with the shipment and includes: one or more processors; a shipment parameters measurement unit to control the one or more processors to measure one or more parameters of the SH, wherein the device is configured as a node on a blockchain (BC), the BC carrying one or more shipment contracts (SCs), each of the one or more SCs comprising desired shipment parameters (SPs) corresponding to a given respective shipment; and a shipment parameters compliance unit to control the one or more processors to access, using private key of the device, SC corresponding to the SH, and compare the measured one or more parameters of the SH with corresponding desired SPs that form part of the SC to confirm compliance of the respective SC.

No. of Pages : 27 No. of Claims : 10
A system (200) for detecting fire in vicinity of a refrigerator (100), the system (200) comprising a temperature sensor (202) for detecting a room temperature value in vicinity of the refrigerator (100), an ambient temperature unit (204) for receiving a surrounding area temperature value, a network module (302), a control unit (206) in communication with the temperature sensor (202) and the ambient temperature unit (204); and an alarming unit (208) for alarming a user, on occurrence of fire in vicinity of the refrigerator (100). Further, the surrounding area temperature value is provided to the ambient temperature unit (204) from the network module (302) through a third party application server (306) and the control unit (206) is configured to compare the room temperature value and the surrounding area temperature value for determining the occurrence of fire in vicinity of the refrigerator (100).
Title of the invention: COMPOSITION OF CONCRETE USING LIQUID WASTE FROM PAPER MILL AND METHOD THEREOF

Abstract:
Standard cube of size 150mm — 150mm — 150mm were used to prepare concrete specimens to test compressive strength of concrete. Hence to compare the conventional concrete and concrete made up of Liquid waste from Paper Mill and admixture, the compressive strength has been observed through concrete cubes. Concrete composition comprising of cement, coarse and fine aggregates, steel fibers and silica fume as a partial replacement of cement in various proportions. Certain chemical admixtures have been added in the concrete industry to enhance mechanical properties of concrete. In the present study, Chemical admixture of Sikaplast is used for concrete of grade M30. So, In order to consume liquid waste coming out from paper mill and to check its behavior with concrete, the chemical admixture of Sikaplast has been replaced with liquid waste from paper mill.

No. of Pages : 14 No. of Claims : 9
A mounting structure (100) includes a battery tray (102) having a rectilinear base (104) defined by edges (106, 108, 110, 112) provided with flanges (114), and a plurality of beads (116a, 116b, 116c) proximal to the edges (106, 108, 110, 112) disposed on the base (104) in an I-shaped bead pattern, the bead (116c) defining a transverse portion (117a) and a lateral member (117b); and an auxiliary component mount bracket (120) having a central member (122) disposed along the edge (112), a plurality of extensions (124) extending upward and downward from the central member (122), and protruding in a plane away from the base (104), a continuous flange (126) extending arcuately across the central member (122) and the plurality of extensions (124), and secured along the edge (108), and a vertical arcuate flange (128) extending across the central member (122) and the plurality of extensions (124).
The subject matter disclosed herein relates to a vehicle body front end structure (300) to mount radiator assembly at three mounting points. The vehicle body front end structure (300) includes hood support member (301), radiator upper mounting support member (302), a pair of vertical support members (303), an open box type bracket (304) at upper corner joints and a radiator lower mount support member (305). The bracket (304) is provided at the corner to join the side ends of the members (301, 302) and upper end of member (303). The bracket (304) is open box type bracket which receives the support members from the open side and attach with the support members with three sides, such as inner side wall, outer side wall, and middle upper wall. The coupling section of the bracket (304) extend along vehicle height H direction to cater all vertical loads of the radiator assembly and the vehicle hood during closing operation.
**Title of the invention**: AN ENGINE OIL FILLING STRUCTURE FOR A VEHICLE

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7) SINGH, HARPREET

**Abstract :**
An engine oil filling structure (100) for a vehicle includes an engine oil receiving portion (102) defining a substantially hollow cylindrical opening surrounded by a cylindrical wall (104), the engine oil receiving portion (102) having a converging-diverging throat (106) defined by a converging part (106a) and a diverging part (106b); and a covering structure (108) configured to be removably secured to the engine oil receiving portion (102), the covering structure (108) defining a gripping part (110), and an inserting part (112) extending from the gripping part (110), the inserting part (112) being configured to be retained about the converging-diverging throat (106) upon securing of the covering structure (108) with the engine oil receiving portion (102).
The subject matter disclosed herein relates to rear floor panel structure (100) to mount spare tire in spare tire mounting well. The rear floor panel structure (100) has a vertical panel (105) and a spare tire mounting well. The spare tire mounting well comprises an upper zone (101) connected with intermediate zone (102) by a connecting step (101a). The intermediate zone (102) further connects with middle zone (103) by a connecting step (102a) and the middle zone (103) connects with lower zone (104) by a connecting step (103a). The upper zone (101), the intermediate zone (102), the middle zone (103), and the lower zone (104) define a concave shape spare tire mounting well. The spare tire mounting well has a plurality of beads (111) which start from top edge of the intermediate zone (102) and extend up to lower zone (104) to provide stiffness to the spare tire mounting well. The spare tire mounting well has an L shaped step at front portion which joins with the vertical panel (105) to form a U shaped section joinery.
**Title of the Invention:** A HEAT SHIELD BRACKET CONFIGURED WITH A MUFFLER OF A VEHICLE

**Abstract:**
A heat shield bracket (100) configured with a muffler (102) of a vehicle includes a horizontal member (104) defining a rectilinear profile, the horizontal member (104) being configured to be disposed on the muffler (102); and a vertical member (106) extending from the horizontal member (104) to define a joint linear edge (105), the vertical member (106) defining a partial rectilinear profile through a plurality of vertical edges (108) extending from the joint linear edge (105), and a partial trapezoidal profile through a plurality of tapered edges (110) extending from the plurality of vertical edges (108), wherein a shorter top edge (112) of the trapezoidal profile includes a plurality of short edges (114) separated by an arcuate profile (116).

**No. of Pages:** 13  **No. of Claims:** 8
The present disclosure provides a formfitting loose tube (100) for optic cables. The formfitting loose tube (100) includes a loose tube wall (105). The loose tube wall (105) includes first sides (110), second sides (120), a plurality of deformation induction tabs (130) and a plurality of fiber optics (150) stacked together having a shape form. The plurality of deformation induction tabs (130) includes curving sections (410). The curving sections (410) intersect the first sides (110) and the second sides (120) at intersections (420). The first sides (110) and the second sides (120) of the loose tube wall (105) are configured to fit the shape form of the plurality of fiber optics (150) stacked together. The plurality of deformation induction tabs (130) induces elastic deformation of the loose tube wall (105) under external stress.

No. of Pages : 36 No. of Claims : 11
This invention relates to stable egg white nanoparticles for use as a nanocarrier for drug delivery, said nanoparticles having a spherical shape with a size of 102 to 120 nm and a process for the preparation thereof.

No. of Pages: 24
No. of Claims: 9
Title of the invention: A METHOD FOR SYNTHESIS OF METAL NANOPARTICLE ENCAPSULATED WITH A PLURALITY OF SHELLS OF ZEOLITE

Abstract:
A method for synthesis of metal nanoparticle encapsulated with a plurality of shells of zeolite is disclosed. The method includes preparing one or more metal nanoparticles. The method also includes coating the one or more metal nanoparticles with a metal oxide material to obtain one or more coated nanoparticles. The method further includes converting the one or more coated nanoparticles into a first zeolite capsule. The method further includes coating the first zeolite capsule with the metal oxide material to obtain a first coated zeolite capsule. The method further includes converting the first coated zeolite capsule into a second zeolite capsule using a hydrothermal synthesis method.
Title of the invention: SMART INVENTORY MANAGEMENT SYSTEM

Abstract:
The present invention provides a smart food stuff inventory management system inside a storage equipment. The system involves the use of weighing sensor and suitable image processing techniques to track the food items present in the storage equipment. The system is further adapted to be connected to a mobile device and to provide inventory related notifications to the user of the mobile device.
Title of the invention: IMPROVED FERMENTATION DEVICE FOR FUNGAL CULTIVATION AND A METHOD FOR THE SAME

Abstract:
The invention relates to an improved bioreactor for fungal cultivation, comprising plurality of heating coils arranged in the wall of the bioreactor; at least one air sparger tube with two ends; a first end of the bioreactor sparger tube associated with a filtered air supply line connected and a second end of the bioreactor sparger tube. The method of fungal cultivation, comprises the steps of introducing sparger into the base of the bioreactor for air supply during normal operating conditions in airlift systems and bubble column bioreactors; allowing air to pass to the liquid surface; creating of interfacial areas by the air as it rises to the surface; and mixing of media non-uniformly by the air sparger from base of bioreactor.

No. of Pages: 10 No. of Claims: 5
The invention relates to water-soluble fullerene complex and preparing method thereof, that can effectively solve the problems of poor solubility, and poor biocompatibility of the conventional fullerene, and adopts a novel method comprising synthesis and derivatization to a water soluble adduct by thermolysis with azido-meta-meconine, followed by mild oxidation with aqueous alkaline KMnO4. On acidification a Mn complex of the tri adduct C60 was isolated. The latter reaction brings about the oxidation of the lactone ring of azido-meta-meconine without affecting the fullerene cage and thus retaining its inherent properties. The water-soluble fullerene prepared according to the invention has the advantages that the characteristics of fullerene are not damaged; the toxicity is low; the stability is favourable; the preparation method is simple; the cost is low; and the water-soluble fullerene serves various objectives in nano medicine and material sciences.
A system (100) for torqueing of a banjo bolt in a steering cylinder is disclosed. The system includes a fixture (102), a first switch (104), a torque wrench (106), a second switch (108) and sensing and timing means (160). A steering cylinder is placed on the fixture (102). The first switch (104) is positioned in proximity to the fixture (102) to sense the presence of the steering cylinder and generate a first signal. The second switch (108) senses completion of torqueing of bolt in steering cylinder and generates a second signal. The sensing and timing means (160) includes a transmitter (110) to transmit the signals, a receiver (202) to receive the transmitted signals, a timer (204) to count the time elapsed after placement of steering cylinder on said first switch (104) and a counter (206) to count the number of steering cylinders with torqued banjo bolts.
This invention relates to an electrode for the determination of ammonium ion comprising a composite of graphene/ graphite (>90% w/w) and ammonium copper phosphate (NH4CUPO4) (5-10%), optionally with traces of pyridine as stabilizer, said electrode being chemically stable at pH=4 to 7.
A cannula securing assembly (300) for selectively engaging and disengaging a cannula (302) in a surgical system (100) is disclosed herein. The cannula securing assembly comprises of a housing (502) that includes at least one aperture (602) to receive a portion (410) of the cannula (302) and a locking plate (504) including at least one aperture (516) configured to engage with the portion (410) of cannula (302) received in the at least one aperture (602) of the housing (502). The locking plate (504) further includes a releasing means (512) at one end of the locking plate (504) wherein the releasing means (512) configured to be exposed on an exterior surface of the housing (502). The cannula securing assembly (300) further comprises of a compression means (508) affixed to a slot (520) on an interior surface of the housing (502) and configured to engage with the locking plate (504) where the compression means (508) is configured for biasing the locking plate (504) to facilitate engaging of the cannula (302) with the cannula securing assembly (300) and the releasing means (512) is configured for disconnecting the biasing of locking plate (504) to facilitate disengaging of the cannula (302) with the cannula securing assembly (300).
BENZOTHIAZEPINE COMPOUNDS AND THEIR USE AS BILE ACID MODULATORS

Abstract Of The Invention
The invention relates to benzothiazepine derivatives of formula (I). These compounds are bile acid modulators having ileal bile acid transport (IBAT) and/or liver bile acid transport (LBAT) inhibitory activity. The invention also relates to pharmaceutical compositions comprising these compounds and to the use of these compounds in the treatment of fatty acid metabolism and glucose utilization disorders, gastrointestinal disorders and liver diseases.
Title of the invention: A SEXUAL ASSAULT EVIDENCE COLLECTION TEST KIT AND RELATED SYSTEM AND METHOD

Abstract:
The present invention relates to an improved process of DNA Evidence and Sample collection from the victim of sexual assault and from the crime scene investigation, transport and storage of DNA Evidence and Sample and the system to track the DNA Evidence and Sample Collection Kits after the kits are activated for use.

No. of Pages: 57
No. of Claims: 13
A rotary tool magazine structure for a tool machine includes a base, a turntable and a plurality of tool holders. The turntable is rotatably coupled to a front surface of the base. The tool holders are pivotally connected to a periphery of the turntable. Wherein, one of the tool holders at a specific position is operable to pivot between a first position and a second position. Each of the tool holders is adapted to receive a tool and includes a central axial line along which the tool is placed into or removed out of the tool holder. An acute angle is formed between the central axial lines when the tool holder is at the first position and the second position. Whereby, the tool holder pivots with a shorter distance in the tool-changing process, and the time of the tool-changing process is reduced.
Title of the invention : ACCELERATED TASK PERFORMANCE

Abstract:
Systems and processes for accelerating task performance are provided. An example method includes, at an electronic device including a display and one or more input devices, displaying, on the display, a user interface including a suggestion affordance associated with a task, detecting, via the one or more input devices, a first user input corresponding to a selection of the suggestion affordance, in response to detecting the first user input: in accordance with a determination that the task is a task of a first type, performing the task, and in accordance with a determination that the task is a task of a second type different than the first type, displaying a confirmation interface including a confirmation affordance.
## Title of the invention: COMPOSITION FOR TREATING DIABETIC DISEASE

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### Abstract:
Provided is a composition for treating a diabetic disease, which serves as a meal substitution for a patient having the diabetic disease. The composition contains a vegetable powder mixture and/or cricket powders.

### No. of Pages: 63 No. of Claims: 3
The present disclosure provides a method for separation of an organic film from a solar cell module, the separation method including the following steps: treating the solar cell module by a heat treatment in combination with an ultrasonic treatment; and performing separation of the treated solar cell module by buoyancy, thereby achieving the separation of the organic film from the module. The present disclosure uses the heat treatment in combination with the ultrasonic treatment to separate the organic film of the solar cell module, so that a stripping rate of the solar cell module reaches 97% or more, and the organic film after detachment does not adhere to the active material, the active material layer remains intact, the surface is clean and has no gelatin spots, and a loss rate is 1% or less, and thus the method is efficient, convenient, and easy to industrialize.
Title of the invention : LIGHT WEIGHT DISPLAY GLASSES

Abstract :
Architecture and designs of wearable display devices are described. According to one aspect of the present invention, at least one optical conduit is embedded in or integrated with a temple of the wearable display device. The optical conduit is used to transport an optical image from one end to another end, where the optical image is generated in an image source (e.g., microdisplay) in accordance with image data. The microdisplay is powered and receives the image data and control signals via an active optical cable.

No. of Pages : 64 No. of Claims : 20
Title of the invention: METHOD AND APPARATUS FOR TRANSPORTING OPTICAL IMAGES

Abstract:
Architecture and designs of wearable display devices are described. According to one aspect of the present invention, at least one optical conduit is embedded in or integrated with a temple of the wearable display device. The optical conduit is used to transport an optical image from one end to another end, where the optical image is generated in an image source (e.g., microdisplay) in accordance with image data. The microdisplay is powered and receives the image data and control signals via an active optical cable.

No. of Pages: 63 No. of Claims: 10
Techniques for reducing weight on wearable display devices are described. In one embodiment of the present invention, an active optical cable is used to transmit image data as well as control signals along with various instructions. The active optical cable is extended all the way to a frame holding an integrated lens via a temple, where an image source including an optical cube with a microdisplay device (e.g., LCOS) and a light source generates an optical image per the image data. The optical image is then projected into the integrated lens for view by a user or a wearer of the wearable display device.

No. of Pages : 64 No. of Claims : 16
Techniques for reducing weight on wearable display devices are described. In one embodiment of the present invention, an active optical cable is used to transmit image data as well as control signals along with various instructions. The active optical cable is used between a wearable device and a control box (portable device) or extended all the way to a frame holding an integrated lens via a temple. An exemplary active optical cable includes one or more optical fibers for transporting control signals, image data and various instructions while a minimum number of wires are used (e.g., for power and ground).
This air conditioner is provided with an electric motor (1), and a power conversion device (1) which uses a vector control method to perform power conversion. The power conversion device (1) is provided with: a pulse control unit (7) for outputting a pulse signal; a power conversion circuit (41) which uses the pulse signal to convert DC power into AC power; a current detection unit (6) which detects the current of the power conversion circuit (41); a vector control unit (8) for generating a command voltage for the pulse control unit (7); and a pulse stopping control unit (9) which generates a pulse stopping control signal for stopping the pulse signal in an interval determined using the current phase as a reference, and outputs the pulse stopping control signal to the pulse control unit (7). The vector control unit (8) starts operation of the pulse stopping control unit (9) if the motor current of the electric motor (1) is within a prescribed range of the motor current at the present rotational speed when there is no load.
A method implemented in a user equipment (UE) includes receiving a first reference signal (RS) from a first transmit antenna port and performing channel estimation based on the first RS. The method also includes obtaining an indication that the first RS and a second RS share a spatial property and receiving the second RS from a second transmit antenna port. The method further includes inferring the shared spatial property for the second RS based on the indication and performing channel estimation based on the second RS using the inferred spatial property.
Title of the invention : CIRCUIT BREAKER

Abstract :
Disclosed is a circuit breaker (100), comprising a moving contact (21), a fixed contact (22), a spindle (34) and an operating mechanism (30). The moving contact (21) can rotate, relative to the fixed contact (22), around a centre of rotation (0) of the spindle (34). Turning on or breaking of a circuit is realised by means of contact or disconnection between the moving contact (21) and the fixed contact (22). The operating mechanism (30) comprises an upper connecting rod (32), a lower connecting rod (33) and a handle (311). The upper connecting rod (32) is arranged in such a manner that same can rotate around one end of the upper connecting rod (32) under the driving action of the handle (311), and the other end of the upper connecting rod (32) is rotatably connected to one end of the lower connecting rod (33) by means of a connecting rod articulated shaft (36), so that the other end of the lower connecting rod (33) is articulated to the spindle (34) and can drive the spindle (34) to drive the moving contact (21) to rotate, wherein the working length of the upper connecting rod (32) and the working length of the lower connecting rod (33) as well as the working length of the upper connecting rod (32) and a distance from a point (A), where the lower connecting rod (33) and the spindle (34) are articulated, to the centre of rotation (0) of the spindle (34) have a pre-determined proportional relationship, so that an angle of rotation, formed after the moving contact (21) is disconnected from the fixed contact (22), of the moving contact (21) is greater than 30 degrees. Thus, the purpose of improving the breaking capacity of the circuit breaker (100) is realised.
Provided are a method and device for detecting an equivalent load of a wind turbine generator system. The method comprises: within each detection period, detecting environment data of each wind turbine generator system in a wind farm (S110); within each detection period, detecting loads of one or more correction wind turbine generator systems of the plurality of wind turbine generator systems, and using the detected loads to calculate equivalent loads of the correction wind turbine generator systems (S120); and based on the detected environment data of each wind turbine generator system, using a load estimation model to determine an equivalent load of each wind turbine generator system (S130), wherein the load estimation model indicates a relationship between the environment data and the equivalent loads of the wind turbine generator systems, and before using the load estimation model within each detection period, equivalent loads calculated within a current detection period and equivalent loads, determined through the load estimation model within a prior detection period, of the correction wind turbine generator systems are used to correct parameters of the load estimation model.
According to one exemplary embodiment, a wireless terminal supporting wireless communication with a wireless communication network. The wireless terminal may be configured to operate in a connected mode during which the wireless terminal transmits uplink data to the wireless communication network and/or receives downlink data from the wireless communication network, in an inactive mode during which the wireless terminal maintains an access stratum context and a resume identity, and in an idle mode during which the wireless terminal does not maintain an access stratum context. The wireless terminal may store (1001) mobility history information for a cell visited by the wireless terminal, and the information for the cell may include a time spent in the inactive mode in the cell. The wireless terminal may also transmit (1007) the mobility history information for the cell visited by the wireless terminal to a base station of the wireless communication network.

No. of Pages : 39 No. of Claims : 34
Disclosed herein are a sleep management method includes obtaining sleep data of a user, obtaining sleep information of the user on the basis of the sleep data of the user, identifying a user sleep type group to which a sleep type of the user belongs among a plurality of sleep type groups on the basis of the sleep information of the user, and displaying sleep advice corresponding to the user sleep type group.
The present solution covers identifying a recommended treatment for a patient based on records of similar patients, wherein the similarities are non-obvious and non-linear. The solution generates a similarity map that minimizes the variance of elements records among a curated group of patients, and this similarity map is used to find the patients who are most similar to an untreated patient.
Title of the invention: “ROLLING MILL AND ROLLING MILL ADJUSTMENT METHOD”

The present invention is provided with a work-side position measurement device and a drive-side position measurement device that directly measure the rolling-direction position of roll chucks, and the rolling-direction positions of upper/lower work rolls 110A and 110B and upper/lower auxiliary rolls 120A and 120B are zero-point adjusted or are adjusted to a prescribed position. Alternatively, the amount of change in the sheet wedge due to minute axial overlap between work rolls 810A and 810B and auxiliary rolls 820A and 820B is calculated, and the leveling amounts of a work-side pressing cylinder device 870A and a drive-side pressing cylinder device 870B are adjusted such that the sheet wedge is no greater than a prescribed value. Thus, left-right asymmetry in the sheet thickness distribution (sheet wedge) of a rolled material is easily adjusted even if misalignment occurs in the rolling-direction positions of the roll chucks due to wear of various structural members such as a liner group.

No. of Pages : 105 No. of Claims : 20
# ELECTRIC CAR CONTROL DEVICE

**Title of the invention:** ELECTRIC CAR CONTROL DEVICE

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2) TOSHIBA INFRASTRUCTURE SYSTEMS AND SOLUTIONS CORPORATION

**Name of Inventor:**

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2) MAKINO Tomoyuki

**Abstract:**
The power car control device of an embodiment has a case, a converter, an inverter, a cooling unit for the converter, and a cooling unit for the inverter. The case is installed under the floor of a car body. The converter is housed inside the case, is connected to an alternating-current power supply, and converts the supplied alternating-current power into direct-current power. The inverter is housed inside the case and converts the direct-current power into alternating-current power for driving an electric motor. The cooling unit for the converter is disposed on the bottom surface side of the case and cools the converter. The cooling unit for the inverter is disposed on a side surface side of the case and cools the inverter.

No. of Pages: 16  No. of Claims: 4
A cutting tool according to an embodiment of the present disclosure is provided with a blade tip that includes cubic boron nitride and/or polycrystalline diamond. The blade tip has a rake surface, a flank surface, and a cutting blade. The flank surface is continuous with the rake surface. The cutting blade is provided at the ridgeline of the rake surface and the flank surface. The curvature radius of the cutting blade is 2-8 μm.
VEHICLE LAMP CONTROL DEVICE AND METHOD OF CONTROLLING VEHICLE LAMP
CONTROL DEVICE

Title of the invention:

This vehicular lighting control device is equipped with a detection circuit detecting the terminal voltage of a power generator terminal and controlling a control switch element on the basis of the detected terminal voltage. The detection circuit turns-on the control switch element to cause the LED lamp to turn on if the terminal voltage is at a pre-set first threshold voltage or higher, turns-off the control switch element to cause the LED lamp to turn off if the terminal voltage is lower than the first threshold voltage, and forcibly turns-off the control switch element if the node voltage of a node on the power generator terminal side of a rectifying element is lower than a pre-set second threshold voltage.

No. of Pages : 21 No. of Claims : 15
The present disclosure relates to solid dosage forms comprising anti-HCV compounds and methods of using such dosage forms to treat or prevent HCV infection. Direct-acting antiviral agents (DAAs) have a high cure rate, and favorable tolerability in persons infected with hepatitis C virus (HCV). However, shorter courses of therapy can improve adherence, affordability, and increase DAAs accessibility. The addition of an NS3 protease inhibitor to dual NS5A-NS5B (nucleoside) inhibitors enhances antiviral efficacy, and reduces treatment duration to 3 weeks (wks) in individuals with a rapid virologic response (RVR), defined as plasma HCV RNA< 1,000, IU/mL by Day 2 of treatment.
Title of the invention: COMPRESSOR

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Name of Inventor: HIGUCHI Masahide

Abstract:
This compressor is provided with a rotating shaft (12) having an eccentric part (26), an electric motor having a rotor (6) linked to the rotating shaft (12), a compression mechanism section driven by the electric motor via the rotating shaft (12), a first balancing weight (101) provided to one end, in the axial direction, on the side of the rotor (6) that faces the compression mechanism section, and a second balancing weight (102) provided to the other end of the rotor (6) in the axial direction. The first and second balancing weights (101, 102) are disposed so that the centers of gravity of the first and second balancing weights (101, 102) are positioned at pre-set advanced angles θ1, θ2 in the rotational direction of the rotor (6), relative to a reference plane passing through the rotational center O of the rotating shaft (12), along the eccentric direction of the eccentric part (26). A compressor is thereby provided in which vibration and noise of the rotor can be reduced inexpensively and with a simple configuration, without adding any new components.
A polymeric container including a base, a body, a finish, finish threads, and a tamper lip. The body extends from the base. The finish defines an opening through which a product can pass into, and out of, an internal volume of the container defined at least in part by the body. The finish threads are at an outer surface of the finish, and are configured to cooperate with closure threads of a closure to secure the closure to the finish. The tamper lip extends from the outer surface of the finish, and is configured to replace the support flange during handling, and to cooperate with a tamper tab of the closure. The closure diameter is about the same as the neck diameter.
The present disclosure relates to an off-screen display method and apparatus, which belong to the technical field of information processing. The method comprises: acquiring format information about information content needing to be displayed by means of an off-screen display function, and content elements required for off-screen display; acquiring a reference time, wherein the reference time refers to a system time acquired by an AP when a screen is switched off; and based on the reference time, according to the format information and the content elements required for off-screen display, displaying the information content by means of the off-screen display function. In the embodiments of the present disclosure, format information about information content needing to be displayed by means of an off-screen display function, and required content elements can be acquired, and a reference time determined by an AP when a screen is switched off is acquired; thus, after the screen is switched off, display can be directly carried out according to the acquired reference time, format information and content elements, without the need to wake up the AP every minute so as to acquire the current accurate time and also without the need to carry out drawing according to the acquired time every minute, thereby reducing power consumption.

No. of Pages : 21 No. of Claims : 14
A telephoto lens, the telephoto lens being provided with a first lens (E1), a second lens (E2), a third lens (E3), a fourth lens (E4) and at least one subsequent lens sequentially from an object side to an image side along an optical axis. The first lens (E1) has positive focal power, and an object-side surface (S1) thereof is a convex surface; an axis distance TTL from the object-side surface (S1) to an imaging surface (S13) of the first lens (E1) and a total effective focal length f of the telephoto lens meet a condition therebetween of: TTL/f ≤ 1.0; the fourth lens (E4) has positive focal power, and a condition is met between the effective focal length f1 of the first lens (E1), the effective focal length f4 of the fourth lens (E4) and the total effective focal length f, the condition being: 1
Provided is a camera lens, having a total effective focal length \(f\) and an entrance pupil diameter \(EPD\), and comprising, in order along the optical axis from the object side to the image side, a first lens (E1), a second lens (E2), a third lens (E3), a fourth lens (E4), a fifth lens (E5), and a sixth lens (E6), and characterized in that said first lens (E1) has a positive focal power, said second lens (E2) has a negative focal power, said third lens (E3) has a positive focal power, said fourth lens (E4) has a positive focal power or a negative focal power, said fifth lens (E5) has a positive focal power or a negative focal power, and said sixth lens (E6) has a negative focal power. In addition, the total effective focal length \(f\) and the entrance pupil diameter \(EPD\) satisfy \(f/EPD \leq 1.8\).
(54) Title of the invention : CAMERA LENS ASSEMBLY AND CAMERA DEVICE EQUIPPED WITH CAMERA LENS ASSEMBLY

(51) International classification : G02B 13000
(31) Priority Document No : 201610963755.0
(32) Priority Date : 28/10/2016
(33) Name of priority country : China
(86) International Application No : PCT/CN2017/081196
  Filing Date : 20/04/2017
(61) Patent of Addition to Application Number : NA
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(62) Divisional to Application Number : NA
  Filing Date : NA

(57) Abstract :
A camera lens and a camera device comprising the same. The camera lens comprises: sequentially arranged along an optical axis from an object side to an imaging side, a first lens (E1), a second lens (E2), a third lens (E3) and a plurality of subsequent lenses. The first lens (E1), the second lens (E2), the third lens (E3) and the plurality of subsequent lenses together, form a total effective focal length f; and a combined focal length f12 of the first lens (E1) and the second lens (E2) and a focal length f3 of the third lens satisfy: -0.7 < f12/f3 < 0.

No. of Pages : 62 No. of Claims : 32
**Title of the invention:** CAMERA LENS ASSEMBLY AND CAMERA DEVICE

**Abstract:**
A camera lens, comprising, along an optical axis and sequentially from an object side to an image side, a first lens (L1), multiple successive lenses, and a photosensitive element disposed on an imaging plane. The first lens (L1) has a negative focusing power, and an object-side surface (S1) being a concave surface. The relationship between an on-axis distance TTL of the object-side surface (S1) of the first lens to the imaging plane and a half of a diagonal line length ImgH of an effective pixel region of the photosensitive element meets the following formula: 1.5 < TTL/ImgH < 1.7.
(54) Title of the invention: STEEL FOR MECHANICAL STRUCTURES AND INDUCTION HARDENED STEEL PARTS

(57) Abstract:
The chemical components of this steel for mechanical structures include, in mass%, C: 0.40 to 0.70%, Si: 0.15 to 3.00%, Mn: 0.30 to 2.00%, Cr: 0.01% or more but less than 0.50%, S: 0.003 to 0.070%, Bi: more than 0.0001% but not more than 0.0050%, N: 0.0030 to 0.0075%, Al: 0.003 to 0.100%, P: 0.050% or less, and B, Mo, Ni, Cu, Ca, Mg, Zr, Rem, Ti, Nb, V, Sb, Te, and Pb as necessary, the balance being Fe and impurities. Both 290 — C + 50 — Si + 430 ≥ 620 and d + 3σ < 20 are satisfied. In a cross section parallel to the longitudinal direction, the density of MnS having an equivalent circle diameter of less than 2.0 μm is 300/mm² or more.
**Title of the invention:** SUPPORTING MIXED NUMEROLOGIES

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2) CHENG Jung Fu
3) DAHLMAN Erik
4) KOORAPATY Havish
5) LARSSON Daniel
6) PARKVALL Stefan

**Abstract:**
Methods and apparatus for configuring and identifying a numerology to be utilized for a communication between a user equipment (102) and a network node (106) are provided. An example method is provided for determining a numerology (111) to be used for communication with a network node (106) over a subset of time-frequency resources in a wireless communication system (100). The example method includes receiving a control signal from the network node (106) and determining the numerology (111) to be used for the communication based on the control signal. In an aspect, the numerology can be indicted by the control signal implicitly or explicitly. Example methods at the network node are also provided, as well as corresponding devices, computer programs, and instructions.

No. of Pages: 16  No. of Claims: 41
A driving control device and method for the yaw electromotors of a wind power generation set. The driving control device (400) comprises a frequency converter (410), a fault cut-out contactor (420), and a contactor (430); the frequency converter is used for performing driving control on yaw electromotors (M1, M2); the fault cut-out contactor is connected in series between the frequency converter and the yaw electromotors and is used for disconnecting when a fault has occurred in the frequency converter so as to isolate the frequency converter in which the fault has occurred; and the contactor is connected in parallel with the frequency converter and the fault cut-out contactor, and is also connected with the yaw electromotors to further drive the yaw electromotors after the fault cut-out contactor is disconnected. Problem of low reliability of driving control on the yaw electromotors can be solved by using the driving control device and method.
**Title of the invention:** Method And Device For Distributing Active Power For Wind Farm

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**Abstract:**
A method and device for allocating active power of a wind farm. The method comprises: calculating a current total active power variation of a wind farm according to a current frequency variation of an electric grid (101); if the current total active power variation of the wind farm is greater than zero, then according to the current total active power variation and a single-unit energy storage value of each wind-power generating set in the wind farm, allocating a current single-unit active power variation to each wind-power generating set according to a first pre-set strategy; and if the current total active power variation of the wind farm is less than zero, then according to the current total active power variation and a reducible power value of each wind-power power-generating set in the wind farm, allocating a current single-unit active power variation to each wind-power power-generating set according to the first pre-set strategy (102); and controlling each wind-power power-generating set so that same adjusts an operating state according to the allocated current single-unit active power variation (103). By means of the method and the device, the changed active power values of each of the wind-power power-generating sets in the entire wind farm are as uniform as possible, thereby reducing the impact on the wind-power power-generating set during frequency modulation control.

**No. of Pages : 24 No. of Claims : 14**
A method of converting direct voltage into pulse voltage consists in forming a pulse current from a high direct voltage, said current flowing through an inductive load, and in controlling the magnitude of said current using an electronically controlled resistor. The level of pulse interference radiated into the environment is reduced.

No. of Pages : 13 No. of Claims : 1
This invention relates to stable liquid formulations of the nitrification inhibitor nitrapyrin comprising polar solvents that are stabilized with small amounts of compounds which help to reduce the tendency of polar solutions of nitrapyrin to corrode metal surfaces. Many of the formulations disclosed herein exhibit useful physical, chemical, and bioactive properties including reduced levels of corrosion when in contact with ferrous metals.
**Title of the invention**: AIR CONDITIONER

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**Abstract**: Provided is an air conditioner in which the cleaning of an indoor heat exchanger can be canceled. This air conditioner (100) is provided with: a refrigerant circuit (Q) through which a refrigerant circulates during a refrigeration cycle, wherein the refrigerant flows through components in the following order: a compressor (31), a condenser, an outdoor expansion valve (34), and an evaporator; and a control means which controls at least the compressor (31) and the outdoor expansion valve (34). One among the condenser and the evaporator is an outdoor heat exchanger (32), and the other is an indoor heat exchanger (12). On the basis of a signal from a remote controller or a mobile terminal, the control means cancels a cooling operation after freezing or condensation occurs in the indoor heat exchanger (12), or after a heating operation is performed.

No. of Pages : 33 No. of Claims : 15
According to an exemplary embodiment a method may be provided to operate a central unit, CN, node that is coupled with first and second distributed unit, DU, nodes. Communication is provided (1501) between the CU node and a mobile communication device through the first DU node over a first radio link between the first DU node and the mobile communication device. A message is received (1503) at the CU node from the first DU node informing the CU node that the radio link is temporarily unavailable. Responsive to receiving the message, communication between the CU node and the mobile communication device through the first DU node is suspended (1505), wherein configuration of the first DU node to serve the mobile communication device using the first radio link is maintained while suspending communication between the CU node and the mobile communication device through the first DU node. While suspending communication between the CU node and the mobile communication device through the first DU node, communication may be provided (1507) between the CU node and the mobile communication device through the second DU node over a second radio link between the second DU node and the mobile communication device.
Title of the invention: DRUG DELIVERY DEVICE AND ANTI-BACK DEVICE THEREOF

Abstract:
An anti-return mechanism for a pharmaceutical product delivery device comprises engagement notches provided on a push rod (4), an engagement protrusion (6) provided in the pharmaceutical product delivery device, and a holding slot (7) comprising an accommodating cavity matching the engagement protrusion (6). The engagement protrusion (6) is provided on a sleeve ring having a gap, and tightly holds the push rod (4) when pressed. The engagement protrusion (6), upon receiving a reversing force from a cylindrical frame (1) on the pharmaceutical product delivery device, is capable of moving in a direction opposite to an injection, and becomes fitted and held in the holding slot (7) and locks with the engagement notches by means of clapping. In the anti-return mechanism, as the cylindrical frame (1) on the pharmaceutical delivery device is pressed, a position of the engagement protrusion (6) is changed such that the engagement protrusion (6) is pushed into the holding slot (7) and tightly engages with the engagement notches, connecting and locking the engagement protrusion (6) with the engagement notches by means of clapping, achieving a tight anti-return and holding effect as well as preventing the push rod (4) from reverse movement.

No. of Pages: 9 No. of Claims: 9
A first exemplary embodiment provides a method performed by a wireless device (10) for handling communication of the wireless device in a wireless communication network, wherein the wireless communication network comprises a first radio network node (12) and a second radio network node (13), which first radio network node (12) serves the wireless device (10). The wireless device receives an indication indicating a mapping between one or more channel state information reference signals, CSI-RS, and one or more random access channel, RACH, configurations. The wireless device receives one or more CSI-RSs from the second radio network node (13), and selects a CSI-RS out of the one or more received CSI-RSs. The wireless device further initiates a random access procedure towards the second radio network node (13) using at least part of the RACH configuration mapped to the selected CSI-RS.
An especially robust compound and its derivative metal complexes that are approximately one hundred-fold superior in catalytic performance to the previously invented TAML analogs is provided having the formula (I) wherein Y1, Y2, Y3 and Y4 are oxidation resistant groups which are the same or different and which form 5- or 6-membered rings with a metal, M, when bound to D; at least one Y incorporates a group that is significantly more stable towards nucleophilic attack than the organic amides of TAML activators; D is a metal complexing donor atom, preferably N; each X is a position for addition of a labile Lewis acidic substituent such as (i) H, deuterium, (ii) Li, Na, K, alkali metals, (iii) alkaline earth metals, transition metals, rare earth metals, which may be bound to one or more than one D, (iv) or is unoccupied with the resulting negative charge being balanced by a nonbonded counteraction; at least one Y may contain a site that is labile to acid dissociation, providing a mechanism for shortening complex lifetime. The new complexes deliver catalytic performances that promise to revolutionize multiple oxidation technology spaces including water purification.
A method and apparatus comprises activating a recurable resin by applying a heat source. A foam material is impregnated with the activated recurable resin. The impregnated foam material is dried to substantially harden the recurable resin. The dried impregnated foam material is inserted into a chamber. The chamber comprises a heat resistant material and a shape configured for application to a user's body part, wherein a subsequent application of a subsequent heat source to at least the chamber and an application of the chamber to the user's body part molds the impregnated foam material to the user's body part.
The invention relates to a nutritional composition for infants and young children, such as an infant formula or follow-on formula or growing up milk, preferably an infant formula, and comprising a vitamin or mixtures thereof. The vitamins promote and/or support an ideal myelination trajectory in the brain, such trajectory being close to that observed in infants fed exclusively with human breast milk (HBM). The infants or young children can be between 0 and 60 months, preferably between 0 and 12 months of age.
Title of the invention: RESISTIVE SPOT-WELDING METHOD

Abstract:
A resistive spot-welding method with which a welded joint having anti-delay-fracture properties can be formed, wherein the method is provided with a step for providing energization via an energizing current I1 (kA) while a welding pressure P1 (kN) is applied to a plurality of steel plates using a welding electrode, a step for providing energization via an energization current Ic (kA) over a cooling time period tc (s) while the welding pressure P1 is applied, a step for imparting a welding pressure P2 (kN) onto the plurality of steel plates using the welding electrode over a welding time period tf (s) while energizing the welding electrode with a conduction current I2 (kA) and immediately thereafter raising and lowering the welding pressure in two or more cycles in which a welding pressure P3 (kN) is applied over a welding pressure time period ti (s), a step for applying the welding pressure P2 over the welding pressure time period tf, and a step for releasing the welding pressure and ending energization, the steps being provided in the stated order. 0 ≤ Ic

No. of Pages: 21 No. of Claims: 1
The present invention relates to a novel peptide, a polynucleotide encoding the peptide, an expression vector comprising the polynucleotide, and a pharmaceutical composition, a quasi-drug composition, and a healthy functional food composition which comprise the peptide.

No. of Pages : 103 No. of Claims : 16
Disclosed is a process for preparing a compound of Formula 1, from a compound of Formula 2 wherein X, R1, R2, R3, R4, R5, n, R6, R7, G and W are as defined in the disclosure. Also disclosed are compounds of Formulae 2 and 4 wherein X, R1, R2, R3, R4, R5, n, R6, R7, G and W are as defined in the disclosure. Also disclosed is a process for preparing the compounds of Formulae 2 and 4.
A camera lens, comprising the following lenses sequentially arranged along an optical axis from an object side to an imaging side: a first lens (L1) having negative refractive power, the object side face (S1) of the first lens being a convex face; a second lens (L2); a third lens (L3) having positive refractive power, the object side face (S5) of the third lens being a convex face; a fourth lens (L4); a fifth lens (L5); and a sixth lens (L6) having negative refractive power, the imaging side face (S12) of the sixth lens being a concave face. The second lens (L2), the fourth lens (L4) and the fifth lens (L5) have positive refractive power or negative refractive power respectively, wherein the effective radius DT11 of the object side face (S1) of the first lens (L1) and the effective radius DT21 of the object side face (S3) of the second lens (L2) can meet 1.
A camera lens optical imaging system, the optical imaging system is sequentially provided along the optical axis, from an object side to an imaging side, with: a first lens (L1) having positive refractive power, wherein an object side surface thereof is a convex surface and an image side surface is a concave surface; a second lens (L2) wherein an object side surface thereof a convex surface and an image side surface is a convex surface; a third lens (L3) having negative refractive power; and a fourth lens (L4) having negative refractive power; the focal length f1 of the first lens (L1), the effective focal length f4 of the fourth lens (L4) and the effective focal length f of the optical imaging system satisfy: -0.8 < (f1+f4)/f < 0.
The present invention contributes to suppression of building cost and enhancement in profitability of a solar power generation facility. A construction designing assistance device has: an input data acquisition unit; a provisional designing unit for creating a provisional building surface data 42, and creating a provisional panel arrangement data 46 for each of the provisional building surface data 42; a calculation unit for calculating a building amount point value for each of the provisional building surface data 42, and calculating an integrating power generation amount point value for each of the provisional panel arrangement data 46; and an extraction unit for extracting a combination of the provisional building surface data 42 and the provisional panel arrangement data 46 such that the building amount point value and the integrating power generation amount point value meet a predetermined evaluation standard.
An air conditioner (100) includes a refrigerant circuit (Q) configured such that refrigerant sequentially circulates in a refrigeration cycle through a compressor (31), a condenser, an outdoor expansion valve (34), and an evaporator, and a control unit configured to control at least the compressor (31) and the outdoor expansion valve (34). One of the condenser or the evaporator is an outdoor heat exchanger (32), and the other one of the condenser or the evaporator is an indoor heat exchanger (12). The control unit causes the indoor heat exchanger (12) to function as the evaporator, and an indoor fan (14) to rotate backward during the freezing processing of freezing the indoor heat exchanger (12).
A method for creating a user group is provided. The method may include obtaining order information from a plurality of users. The method may include classifying the plurality of users into one or more user groups based on the order information. The method may also include sending invitation information for joining a user group to each of the plurality of users of the one or more user groups. The method may further include receiving response information associated with the invitation information from at least a part of the plurality of users, and adding the at least a part of the plurality of users into the user groups based on the response information.
METHODS AND SYSTEMS FOR PROVIDING TRANSPORTATION SERVICE

Systems and methods for providing transportation service to a passenger are disclosed. An exemplary method for providing transportation service may include receiving a passenger position from a terminal device, and receiving a vehicle position from a vehicle. The vehicle is matched to provide the transportation service to the passenger. The method may further include determining, by a processor, pick-up locations for the vehicle to pick up the passenger, and providing the terminal device with the pick-up locations. The method may also include receiving, from the terminal device, a selected pick-up location; and navigating the vehicle and the passenger according to the selected pick-up location.
Title of the invention: INFORMATION DISPLAY METHOD, APPARATUS AND MOBILE TERMINAL

Abstract:
Embodiments of the present disclosure disclose an information display method, an apparatus and a mobile terminal, which relate to the field of mobile terminal technologies. The method includes: receiving a press operation on a preset display content; displaying, based on the press operation, a loading bar representing a magnitude of a force value of the press operation; and loading the loading bar to a preset length when the force value of the press operation reaches a preset threshold, and parsing the preset display content. In this solution, intuitive feedback for the magnitude of the force of the press operation is made through the loading bar, so that the user can know the press process, improving the user experience.

No. of Pages: 30  No. of Claims: 8
Abstract:
The present disclosure provides a method and an apparatus for updating an application prediction model, a storage medium, and a terminal. The method includes: detecting that an application uninstallation event is triggered; determining a first application which is uninstalled; deleting a data log of the first application from training sample data when training sample data of an application prediction model includes the data log of the first application, and generating target training sample data; and updating the application prediction model based on the target training sample data. The present disclosure can solve the problem of inconsistency between the actually installed application and the application-related data log included in the training sample data of the application prediction model when an application is uninstalled, and effectively improve the accuracy for predicting an application to be launched using the application prediction model.

No. of Pages : 44
No. of Claims : 11
A method of establishing an application prediction model comprising: determining a first application running in foreground at a sampling time in a preset sampling period; determining whether the first application is installed within a time window having a preset time length and ending with the sampling time, to obtain identity information of the first application; and training a preset machine learning model based on sample data corresponding to the first application and a sample identity of the sample data, wherein the sample identity of the sample data includes the identity information of the first application and the first application.
Title of the invention: ELECTRONIC DEVICE AND PHOTOGRAPHING CONTROL METHOD THEREOF

Abstract:
An electronic device and a photographing control method thereof are provided. The electronic device includes: a housing; a camera provided in the housing; a display screen movably assembled to the housing, and switchable between a first state and a second state with respect to the housing. The display screen has a display portion and a non-display portion, and the non-display portion is light transparent. When the display screen is in the first state, the camera is covered by the display portion. When the display screen is in the second state, the camera faces to the non-display portion, and configured to collect light through the non-display portion and performs imaging.
Title of the invention : FAST MOVING INSTALLATION SUPPORTING SYSTEM

Abstract :
The invention discloses a fast moving installation supporting system, which comprises a number of movable support devices, and each movable support device comprises a support device, a movable device, a support anchor device and an angle bracket device. The movable device can dismantle and install at the bottom of the support device; the support anchor device and the angle bracket device can be respectively dismantled and installed on the top of the support device. The support device includes a supporting structure, a connecting bracket, at least one working platform, at least one skirting board, an aluminum I-shaped board and a mounting flat plate; the support anchor device includes a rotary adjustable device, a base, a channel, a bracing strut and a brace. The fast moving installation supporting system of the invention is equipped with the height-adjustable support anchor device, which can be retractable by whirling the rotary adjustable device of the support anchor device, so that the invention can be suitable to the different floor heights and provide support of different heights. The invention is also equipped with the movable device, which enables the invention to perform rapid moving and increase the progress of construction.

No. of Pages : 43 No. of Claims : 9
MOLDING DEVICE AND MOLDED ARTICLE MANUFACTURING METHOD

A pressing member (47, 47A, 47B, 47C, 47D, 47E) is configured to press a portion-to-be-pressed (R1, R2, R3, R4, R5) of a continuous-fiber sheet (90) against a recessed surface (35, 35A, 35B, 35C, 35D, 35E) of a first mold (21, 21A, 21B) in a state where the continuous-fiber sheet (90) is placed between the first mold (21, 21A, 21B) and a second mold (22, 22A, 22B). A pulling member (46) is configured to bring the continuous-fiber sheet (90) into close contact with the main surface (34, 34B) and the recessed surface (35, 35A, 35B, 35C, 35D, 35E) by pulling a portion of the continuous-fiber sheet (90) located on an outer peripheral side of the portion-to-be-pressed (R1, R2, R3, R4, R5) after the pressing member (47, 47A, 47B, 47C, 47D, 47E) presses the portion-to-be-pressed (R1, R2, R3, R4, R5) against the recessed surface (35, 35A, 35B, 35C, 35D, 35E).

No. of Pages : 60 No. of Claims : 10
Provided is a vehicle glovebox peripheral structure in which the support stiffness of the glovebox design wall, particularly its upper edge, is increased, and in which deformation of the design wall is suppressed without impairing its appearance. A vehicle glovebox peripheral structure 100 according to the present invention comprises: an instrument panel 102; an opening 104 provided in the instrument panel; a tray 106 that occupies a vehicle front side of the opening; a glovebox design wall 108 that is provided on a vehicle rear side of the opening and that, together with the tray, configures a glovebox 110 in which items are containable between itself and the tray; a steering support member 118 that extends in a vehicle width direction at a vehicle frontward direction of the instrument panel and that has two ends secured to a chassis; a pair of stays 120 and 122 that are installed on the steering support member with a gap in between in the vehicle width direction, and extend in a vehicle rearward direction; and a reinforcement member 124 that extends in the vehicle width direction along an upper edge 116 of the glovebox design wall and that has two ends 126 and 128 secured onto the pair of stays respectively.
**Title of the invention :** SEAT HOP-UP SYSTEM FOR SADDLE TYPE VEHICLE

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**Abstract:**
A seat hop-up system for a saddle type vehicle includes an energizing unit and an inclined surface. The saddle type vehicle includes a seat that is attachable to and removable from a vehicle body and is locked to the vehicle body by a locking mechanism. When locking of the seat by the locking mechanism is released, the seat hop-up system hops up the seat by pushing up the seat and keeping the seat in an unlocked state. The energizing unit is provided on the seat or the vehicle body and is configured to energize the seat rearward. The inclined surface is provided on the seat or the vehicle body. Further, when the seat is unlocked and the seat is moved rearward by the energizing unit, the inclined surface is configured to hop up the seat by pushing up the seat.

No. of Pages : 24 No. of Claims : 3
The invention relates to a method for pressing a bobbin (9) against a winding roller (10) at a workstation (2) of a textile machine (1) by means of a clamping device (11), the clamping device (11) comprising a pretensionable spring element (12) for pressing the bobbin (9) against the winding roller (10). The desired pretension of the pretensionable spring element (12) or of a setting parameter representing the desired pretension is thereby specified, and the pretension of the spring element (12) is set corresponding to the specified, desired pretension. A winding device (5) for a workstation (2) of a textile machine (1) comprises a winding roller (10) and a bobbin (9) for pressing against the winding roller (10) and a clamping device (11). The clamping device (11) for pressing the bobbin (9) against the winding roller (10) comprises a pretensionable spring element (12). The clamping device (11) further comprises an adjusting element, particularly an electric motor (13), operatively connected to the spring element (12) and by means of which a specified pretension can be applied to the spring element (12).
A fiber-reinforced resin composition includes a polyamide resin and a polyolefin resin, and when one resin between the polyamide resin and the polyolefin resin is set as a first resin, and the other resin is set as a second resin, the composition has a sea-island structure including a continuous phase C (2) consisting of the first resin and a dispersed phase c consisting of the second resin dispersed in the continuous phase C (2), and in a resin phase separation cross-sectional structure, a total of cross-sectional areas of dispersed phases having a cross-sectional area equal to or smaller than an average cross-sectional area of the reinforcing fiber (3) is 20% or less with respect to a total of cross-sectional areas of all dispersed phases.
Title of the invention: PACKAGING FOR LIQUIDS WITH DRINKING AND POURING SPOUT

Abstract:
A package for liquids, consisting of a folding carton with bottom, hull and collar panels with a liquid-tight bag mounted therein, the upper side of which protrudes above the upper side of the collar panels, which cardboard can be folded open in such a way that also the bag is opened with a closing mechanism that can be locked and with the option to form a drinking or pouring spout that is covered by the top of the bag.

No. of Pages: 20
No. of Claims: 7
**Title of the invention:** ARTIFICIAL INTELLIGENCE BASED-DOCUMENT PROCESSING

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**Abstract:**
An Al-based data processing system analyzes a received information request to generate an interactive visualization including data responsive to the information request. The information request is processed to obtain the primary entity and one or more informational items related to the primary entity. Auxiliary entities and informational items related to the primary entity are identified and searches are executed on a knowledge base and the internet. The results from the searches are analyzed to obtain knowledge nuggets which are included into a selected one of a visualization template to generate the interactive visualization. If it is determined via user interactions with the interactive visualization that an informational gap exists between the information request and the data in the interactive visualization, the interactive visualization can be updated to address the informational gap.
In order to implement a transfer position in a long-stator linear motor, in which position a transport unit \((Tn)\) is magnetically steered in order to be deflected from a first transport section \((Am)\) to a second transport section \((An)\), a stator current \(OAI, U2\) is impressed into the drive coils \((7, 8)\) interacting with the transport unit \((Tn)\) on a first side of the transport unit \((Tn)\) in the transfer area in order to generate the steering effect \((L)\) on this first side, which stator current either generates only an electromagnetic lateral force \((FEMS1, FEMS2)\) or causes only a braking force \((FB)\) against the movement direction \((x)\) of the transport unit \((Tn)\), or only a combination thereof.
A method for preloading an application, a storage medium, and a terminal are provided. The method includes the following. An application to be preloaded is determined in response to an event of application preloading being triggered. When a new application installed within a time-window exists, whether the new application belongs to the application to be preloaded is determined. Then, the new application and the application to be preloaded are preloaded in response to determining that the new application does not belong to the application to be preloaded. By adopting the technical solution described above, both the new application and the application to be preloaded are preloaded, which can improve the hit rate of preloading an application that the user actually launches, thereby increasing not only the launching speed of the application to be preloaded, but also the launching speed of the new application.
The present invention discloses a pulley device which comprises a pulley housing; a sliding plate which is vertically movable and mounted on the pulley housing; a pulley mounted on the sliding plate; a height adjusting mechanism for adjusting the height of the pulley; and a damper connecting the sliding plate and the pulley housing. The pulley device provided by the present invention solved the problems that it is difficult for the screwdriver to adjust the height of the pulley, and some hair or wool being inserted into the adjustment hole, and the thread of the adjusting screw is easy to be damaged in use.
A disclosed rebar coupler includes a first coupling member, a second coupling member, and a coupling means. Accordingly, the connection angle between the first coupling member and the second coupling member is variable to a desired angle. The connection angle between rebars to be connected may be rapidly and conveniently varied at an industrial site to which the rebars are applied.
Title of the invention: OPHTHALMIC LENS COMPRISING LENSLETS FOR PREVENTING AND/OR SLOWING MYOPIA PROGRESSION

Abstract:
Contact lenses incorporating an array of non-coaxial lenslets with add power that create non-coaxial myopic defocus within the optic zone of the lens may be utilized to prevent and/or slow myopia progression. The positive, non-coaxial lenslets cover about twenty to eighty percent of the central pupil area to deliver positive foci of light in front of the retina to slow the rate of myopia progression.

No. of Pages: 42
No. of Claims: 10
Title of the invention: METHOD AND DEVICE FOR PRELOADING APPLICATION, STORAGE MEDIUM AND INTELLIGENT TERMINAL

Abstract:
It is provided a method for preloading an application, which belongs to the field of application loading technologies. The method includes that: in response to receiving a push message from an application, a message content of the push message is acquired (110); whether the application is to be preloaded is determined (120) based on the message content; and an application interface corresponding to the application to be preloaded is preloaded (130) in a precreated preloading active window stack. A terminal is also provided.

No. of Pages: 42 No. of Claims: 11
A object of the present disclosure is to produce a cathode mixture with high capacity. The present disclosure achieves the object by providing a cathode mixture characterized by comprising: a cathode active material including a S element; a sulfur containing compound including an M element, which is Ge, Sn, Si, B or Al, and a S element; a conductive auxiliary material; and substantially no Li element.
(12) PATENT APPLICATION PUBLICATION

(19) INDIA

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(54) Title of the invention: WATERBORNE CLEAR INK COMPOSITIONS

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(57) Abstract:
An aqueous ink composition including water; an optional co-solvent; a sulfonated polyester, wherein the sulfonated polyester has a degree of sulfonation of at least about 3.5 mol percent; and an isoprene rubber. A process of digital offset printing including applying an ink composition onto a re-imageable imaging member surface at an ink take up temperature, the re-imageable imaging member having dampening fluid disposed thereon; forming an ink image; transferring the ink image from the re-imageable surface of the imaging member to a printable substrate at an ink transfer temperature; wherein the ink composition comprises water; an optional co-solvent; a sulfonated polyester having a degree of sulfonation of at least about 3.5 mol percent; and an isoprene rubber. A process including combining a sulfonated polyester resin, having a degree of sulfonation of at least about 3.5 mol percent, water, an optional co-solvent, and an isoprene rubber to form an aqueous ink composition, wherein the ink composition is substantially colorless.

No. of Pages: 43 No. of Claims: 20
VACUUM AND/OR PRESSURE FILTRATION DEVICE FOR FILTRATION OF A SUSPENSION

Vacuum and/or pressure filtration device for filtration of a suspension which comprises a solid and a liquid, comprising a filter drum, wherein the filter drum defines a drum axis, is supported rotatably around the drum axis, comprises an outer jacket, by which a plurality of filter cells are formed, which extend along the drum axis, which are arranged adjacent to each other all around the drum axis, and which are equipped on their outer side with a filter medium, comprises an inner jacket, which is arranged adjacent to the outer jacket, which has an inner jacket outer surface, which limits the filter cells radially inside such that by the inner jacket outer surfaces a plurality of draining surfaces are formed, on which the liquid passing through the respective filter medium during filtration of the suspension can drain as a filtrate.

No. of Pages : 37 No. of Claims : 15
An aqueous ink composition including water; an optional co-solvent; an optional colorant; a sulfonated polyester; and an isoprene rubber. A process of digital offset printing, the process including applying an ink composition onto a re-imageable imaging member surface at an ink take up temperature, the re-imageable imaging member having dampening fluid disposed thereon; forming an ink image; transferring the ink image from the re-imageable surface of the imaging member to a printable substrate at an ink transfer temperature; wherein the ink composition comprises: water; an optional co-solvent; an optional colorant; a sulfonated polyester; and an isoprene rubber. A process including combining a sulfonated polyester resin, water, an optional co-solvent, an optional colorant, a sulfonated polyester, and an isoprene rubber to form an aqueous ink composition.
FILTER DRUM FOR A VACUUM AND/OR PRESSURE FILTRATION DEVICE

Abstract:
Filter drum for a vacuum and/or pressure filtration device for the filtration of a suspension, which comprises a solid and a liquid, comprising: a drive shaft via which the filter drum is rotatably supportable and rotatably drivable, a filter drum body which is formed in a manner separated from the drive shaft, to which the drive shaft extends centrally and which includes a first drum end wall and a second drum end wall as well as a drum jacket wall which extends, along the drive shaft, between the first drum end wall and the second drum end wall and connects the first drum end wall and the second drum end wall to each other, and a first clamping ring set and a second clamping ring set, corresponding to the first drum end wall and the second drum end wall, respectively, by which, in a respective manner, the first drum end wall and the second drum end wall are, via radial clamping, fixedly connected to the drive shaft such that a driving torque applied to the drive shaft is correspondingly transmittable from the drive shaft to the first drum end wall and/or the second drum end wall and, thereby, to the filter drum body via the first clamping ring set and/or the second clamping ring set, respectively.

No. of Pages : 40 No. of Claims : 12
Title of the invention: AQUEOUS INK COMPOSITION COMPRISING A POLYMER ADDITIVE

Abstract:
An aqueous ink composition including water; an optional co-solvent; an optional colorant; a polyester; and a polymer additive, wherein the polymer additive is selected from a member of the group consisting of styrene-butadiene, acrylonitrile-butadiene, acrylonitrile-butadiene-styrene, and combinations thereof. A process of digital offset printing including applying an ink composition onto a re-imageable imaging member surface at an ink take up temperature, the re-imageable imaging member having dampening fluid disposed thereon; forming an ink image; transferring the ink image from the re-imageable surface of the imaging member to a printable substrate at an ink transfer temperature. A process including combining water, an optional co-solvent, an optional colorant, a polyester, and a polymer additive, wherein the polymer additive is selected from a member of the group consisting of styrene-butadiene, acrylonitrile-butadiene, acrylonitrile-butadiene-styrene, and combinations thereof, to form an aqueous ink composition.
**Title of the invention:** SULFONATED POLYESTER INK

**Abstract:**
An aqueous ink composition including water, an optional co-solvent, a sulfonated polyester, and a polyurethane dispersion, and process of making thereof.

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No. of Pages : 38 No. of Claims : 20
A light emitting diode (LED) drive circuit and a method for driving an LED load are provided. The LED drive circuit includes a transistor, an LED load and a control circuit. The transistor and the LED load are connected in series with each other and receive a direct current bus voltage to generate an input current. The control circuit is configured to generate a drive signal for controlling an operation state of the transistor, to control a distribution range of the input current by controlling the amount of accumulated charge of an input current during a half power frequency period to be kept constant. In the LED drive circuit, a total amount of charge during the half power frequency period is kept constant by the charge control, so that no flickering occurs in the case that the input voltage fluctuates, and the efficiency of the LED drive circuit can be improved.
(54) Title of the invention: **METHOD FOR PRODUCING POROUS MATERIAL OF WATER-SOLUBLE POLYMER**

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2) **Tomoyuki UEZONO**
3) **Hiroshi UYAMA**
4) **Chiaki YOSHIZAWA**

(57) **Abstract:**
The disclosure provides a very simple and convenient method for producing a porous material of a water-soluble polymer. The herein disclosed method for producing a porous material of a water-soluble polymer includes a step of preparing a solution in which a water-soluble polymer is dissolved in a mixed solvent of water mixed with a solvent having a boiling point higher than that of water, and a step of evaporating and thereby removing the mixed solvent from the solution. The solubility of the water-soluble polymer in the solvent having a boiling point higher than that of water is lower than the solubility of the water-soluble polymer in water. Voids are formed, in the step of evaporating and thereby removing the mixed solvent, by the solvent having a boiling point higher than that of water.
Provided is a vehicle lower structure capable of simplifying an attachment structure of a seat and effectively utilizing a space below the seat. The vehicle lower structure 1 includes an electrical component 11 provided at an interval from each of a first cross member 4, a second cross member 5, and a side sill 3 in a lower space of the seat, and an air conditioning duct 7 provided so as to bypass the electrical component 11. A seat bracket 9 for attachment of the seat is attached to each of an upper surface 41 of the first cross member 4 and an upper surface 51 of the second cross member 5. A hole 40 penetrating in the vehicle front-rear direction is formed in the first cross member 4. A connection portion of the air conditioning duct 7 and another air conditioning duct 13 is provided in the hole 40.
Title of the invention: HYBRID VEHICLE

Abstract:
To provide a hybrid vehicle that can reduce fuel consumption while keeping the rotational speed of the engine equal to or higher than the idling speed when the clutch is disengaged. A hybrid vehicle includes: an engine; a motor generator capable of assisting drive of the engine; a transmission that transmits power of the engine to the wheels and power of the motor generator to the wheels; a clutch that is provided between the engine and the transmission and between the motor generator and the transmission, and engages and disengages power transmission between the engine and the transmission and between the motor generator and the transmission; and a controller that executes electric idle control, in which fuel supply to the engine is stopped and output torque of the motor generator is controlled in such a manner that rotational speed of the engine becomes idling speed, when the clutch is disengaged and both of the power from the engine to the transmission and the power from the motor generator to the transmission are cut off or when the transmission is in a non-transmission state of the power to the wheels.

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A limiting plate (6) of a road paver (1) is detachably attached to a traverse or to the chassis of the road paver to increase the basic working width. The limiting plate is arranged with variable spacing to a subgrade. In order to prevent the mix from flowing forwards in the direction of travel and at the same time improve the efficiency of the screw conveyor, in which a geometrically defined screw trough is formed, a limiting plate extension is arranged on the limiting plate so that it can be adjusted, particularly in the direction of the subgrade.
The invention concerns a motor vehicle lighting module (8) comprising semiconductor light source (12) with a generally plane lighting surface adapted to emit light along an emission axis perpendicular to said plane; a reflection surface (14) adapted to reflect the light emitted by the light source (12) so as to form, along an optical axis (16), a cut-off light beam, and comprising a central zone (14.1) and at least one zone (14.2-14.5) lateral with respect to the central zone (14.1); the or at least one lateral zone (14.2, 14.3) is configured to form a horizontal cut-off luminous image.
A method, a device, and an integrated circuit utilizes a temperature restricted mode. The method includes determining a temperature of the device. When the temperature is below a first threshold, the method includes enabling a first mode comprising select network operations. When the temperature is above a brick threshold, the method includes enabling a second mode comprising disabling the select network operations. When the temperature is above the first threshold and below the brick threshold, the method includes enabling a third mode comprising modifying at least one of the select network operations.
The invention relates to a method for determining a functional status at a workstation (1) of a textile machine (18), in particular an open-end or air-jet spinning machine, wherein the textile machine (18) comprises a plurality of workstations (1), and wherein a workstation (1) comprises at least one drive (11) in each case, with the aid of which at least one treatment means (4, 5, 6, 7, 8, 9, 10, 19, 20) of the particular workstation (1), which is associated with the drive (11), can be operated for the purpose of treating a fiber material (2, 3, 16). According to the invention, the functional status of at least one treatment means (4, 5, 6, 7, 8, 9, 10, 19, 20) and/or at least one drive (11) of the workstation (1) is determined on the basis of a measurement of a load variable, namely a load angle (a), of the at least one drive (11). Moreover, the invention relates to a textile machine for carrying out the method for determining a functional status at a workstation (1).
Title of the invention: METHOD FOR OPERATING A TEXTILE MACHINE, AND TEXTILE MACHINE

Abstract:
The present invention relates to a method for operating a textile machine, in particular an open-end or air-jet spinning machine, wherein the textile machine comprises a plurality of workstations (1) which are at least partly driven by a single motor, wherein at least one stepper motor (17) is assigned to a workstation (1). According to the invention, it is provided that a load variable of the stepper motor (17), in particular a load angle, is measured and an approach by an element (5; 7; 9; 11; 12; 14; 16) driven by the stepper motor (17) to an end position (E) is detected on the basis of a change of the load variable, in particular an increase of the load angle. Moreover, the invention relates to a textile machine, in particular an open-end or air-jet spinning machine, comprising a plurality of workstations (1) which are at least partly driven by a single motor, wherein at least one stepper motor (17) is assigned to a workstation (1), and wherein the workstation (1) comprises a device for measuring a load variable of the stepper motor (17), in particular a load angle, as well as a controller (18) which operates the stepper motor (17) according to the preceding description.
The present disclosure provides a mobile terminal (100) and a system (30) for controlling a laser projector (10). The system (30) includes a first drive circuit (31), a second drive circuit (32), a microprocessor (35) coupled to the first drive circuit (31), and an application processor (33). The first drive circuit (31) is configured to output an electrical signal to the laser projector (10). The second drive circuit (32) is configured to supply power to the first drive circuit (31). The application processor (33) is configured to, read a preset signal from the microprocessor (35), and power off the second drive circuit (32) to power off the first drive circuit (31) and the laser projector (10), or send a reset signal for restarting the microprocessor (35) to the microprocessor (35), in response to that the application processor (33) cannot read the preset signal.
The present disclosure provides a mobile terminal (100) and a system (30) for controlling a laser projector (10). The system (30) includes a first drive circuit (31), a second drive circuit (32), a watchdog timer (34), a microprocessor (35), and an application processor (33). The first drive circuit (31) is configured to output an electrical signal to the laser projector (10). The second drive circuit (32) is configured to supply power to the first drive circuit (31). The microprocessor (35) is configured to send a first predetermined signal to the watchdog timer (34). The application processor (33) is configured to send a second predetermined signal to the watchdog timer (34). The watchdog timer (34) is configured to power off the second drive circuit (32), in response to that the watchdog timer (34) does not read the first predetermined signal or the second predetermined signal.
A device, system, and method improve a call setup time. The method is performed at a device configured to establish first and second network connections where the second network performs circuit switched voice calls. The method includes receiving a call input to perform a call and determining whether the device is registered with a first feature to perform the call based on an Internet Protocol (IP). When the device is registered with the first feature, the method includes determining whether timeouts for attempting previous IP calls is greater than a threshold. When the timeouts are at least the threshold, the method includes deregistering from the first feature and performing a circuit switched fallback (CSFB) procedure including a handover from the first network to the second network. The method includes performing the call as a circuit switched call.
A control system (30) for a laser projector (10), a terminal (100) and a control method for the laser projector (10) are provided. The control system (30) includes a first driving circuit (31), a microprocessor (35) and an application processor (33). The first driving circuit (31) is connected with the laser projector (10). The first driving circuit (31) is configured to drive the laser projector (10) to project laser. The microprocessor (35) is connected with the first driving circuit (31). The application processor (33) is connected with the microprocessor (35). The application processor (33) is configured to send a control signal to the microprocessor (35) according to a distance between a human eye and the laser projector (10). The microprocessor (35) controls the first driving circuit (31) according to the control signal to enable the laser projector (10) to project laser according to a predetermined parameter.
A fine spinning machine (1) includes a plurality of spinning units (2), an additive supply device (90), an additive supply path, an additive heating section (21), an additive temperature detection section (22), and a central control device (4). Each of the spinning units (2) including at least a draft device (7) and a spinning device (9) forms and winds a spun yarn (10). An additive supply device (90) is an additive supply source for supplying an additive. An additive supply path guides the additive from the additive supply device (90) to the spinning device (9) in each of the spinning units (2). An additive heating section (21) that is provided in the additive supply device (90) heats the additive. An additive temperature detection section (22) that is provided in the additive supply device (90) detects the additive temperature. The central control device (4) controls an operation of the additive heating section (21) based on a detection result of the additive temperature detection section (22).
Title of the invention: ELECTRONIC DEVICES HAVING LOW REFRESH RATE DISPLAY PIXELS WITH REDUCED SENSITIVITY TO OXIDE TRANSISTOR THRESHOLD VOLTAGE

Abstract:
A display may have an array of organic light-emitting diode display pixels operating at a low refresh rate. Each display pixel may include a drive transistor coupled in series with one or more emission transistors and a respective organic light-emitting diode (OLED). A semiconducting-oxide transistor may be coupled between a drain terminal and a gate terminal of the drive transistor to help reduce leakage during low-refresh-rate display operations. A silicon transistor may be further interposed between the semiconducting-oxide transistor and the gate terminal of the drive transistor. One or more capacitor structures may be coupled to the source terminal and/or the drain terminal of the semiconducting-oxide transistor to reduce rebalancing current that might flow through the semiconducting-oxide transistor as it is turned off. Configured in this way, any emission current flowing through the OLED will be insensitive to any potential drift in the threshold voltage of the semiconducting-oxide transistor.
A lamp unit includes: a light source module; and an optical system for projecting light emitted from the light source module with a required light distribution. The light source module includes a thermally-conductive plate, a circuit board attached to the thermally-conductive plate, and a light emitting element mounted on the circuit board and powered via the circuit board. The thermally-conductive plate is provided with a mounting portion for mounting the optical system at a predetermined position with the light emitting element as a reference.
**Title of the invention:** ELECTRONIC ASSEMBLY AND ELECTRONIC DEVICE

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**Abstract:**
An electronic assembly (5) and an electronic device (100) are provided. The electronic assembly (5) includes a bracket (521), a depth element (522) configured to acquire depth image information, a first camera (523) configured to acquire first hue image information, a projector (524) and a second camera (561) configured to acquire second hue image information. The depth element (522), the first camera (523), the projector (524) and the second camera (561) are arranged on the bracket (521) together, and the second camera (561) is arranged between the depth element (522) and the first camera (523), and an image acquisition direction of the second camera (561) is opposite to an image acquisition direction of the first camera (523).

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A clutch device (7) includes a shaft body (10), a rotating body (20), a coil spring (30), a first seat (19), and a second seat (15). The coil spring is provided between the shaft body and the rotating body, concentric with the shaft body and the rotating body. The first seat is provided in the rotating body. A first end of the coil spring is mounted on the first seat. The second seat is provided in the shaft body. A second end of the coil spring is mounted on an outer circumferential surface of the second seat in an interference-fitted state while being allowed to elastically deform in a radially expanding direction. The second seat is a body separate from the shaft body and includes a surface having undergone an anti-wear treatment at least in the outer circumferential surface.
Title of the invention: LUBRICANT COMPOSITION AND DISPERSANTS THEREFOR HAVING A BENEFICIAL EFFECT ON OXIDATION STABILITY

Abstract:
A lubricant composition having greater than 50 percent by weight of a base oil, a dispersant composition comprising: i) optionally a first dispersant comprising one or more reaction products of at least one polyisobutenyl succinic acid or anhydride having a polyisobutenyl group with a number average molecular weight that is less than or equal to 1300, and at least one polyamine; and ii) a second dispersant comprising one or more reaction products of at least one polyisobutenyl succinic acid or anhydride having a polyisobutenyl group with a number average molecular weight greater than 1300, and at least one polyamine; and at least one ashless antioxidant; and wherein a weight ratio of the second dispersant to the dispersant composition is 0.66:1 to 1:1 or a ratio of the weight percentages of nitrogen contributed by the second dispersant to nitrogen of the dispersant composition is 0.62:1 to 1:1.
Provided is a nonaqueous electrolyte secondary battery in which lithium fluorosulfonate is added to the nonaqueous electrolyte solution and which exhibits excellent low-temperature input characteristics after long-term storage at high temperatures. The nonaqueous electrolyte secondary battery disclosed herein includes a positive electrode, a negative electrode, and a nonaqueous electrolyte solution. The positive electrode is provided with a positive electrode active material layer. This positive electrode active material layer contains trilithium phosphate and, as a positive electrode active material, a lithium transition metal composite oxide that contains at least lithium, nickel, manganese, and cobalt. The negative electrode has a coating film on its surface. The nonaqueous electrolyte solution contains lithium fluorosulfonate. The mass proportion of the trilithium phosphate with reference to the positive electrode active material is not less than 0.9 mass% and not more than 4.25 mass%. The content of the lithium fluorosulfonate in the nonaqueous electrolyte solution is not less than 0.135 mass% and not more than 0.850 mass%.
Disclosed herein are techniques for enabling a user to activate a new device with a Mobile Network Operator (MNO) without requiring the user to provide MNO authentication credentials that are easily forgotten. The user activates the new device using credentials from an existing device (associated with the user) that is trusted by the MNO and also using a trust score provided by a third-party server that has knowledge of associations between the user and the existing device. The new device can be a supplemental device, such as a wearable device to a cellular phone, where both devices remain capable of accessing services provided by the MNO after the new device is activated with the MNO. The new device can also be a replacement device, such as a new phone, tablet, or wearable device, where the new device supplants access to services provided by the MNO for an existing device.
A device implementing multi-scheme transaction credentials for a mobile transaction system includes a processor configured to transmit, to a mobile transaction system server, a request to provision a transaction credential on a device secure element. The processor is further configured to receive, from the mobile transaction system server, a provisioning script that, when executed by the device secure element, provisions, on the device secure element, a first applet corresponding to a first transaction network for the transaction credential and a second applet corresponding to a second transaction network for the transaction credential, the first and second applets being provisioned as an applet group having a shared life cycle. The processor is configured to, upon execution of the provisioning script, provide, for display, a single representation of the transaction credential corresponding to both the first and second applets.
**Title of the invention:** BINDING MOLECULES AGAINST BCMA AND USES THEREOF

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- Connie HONG
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- Brian Walter GRANDA
- Haihui LU

**Abstract:**
The present disclosure provides BCMA binding molecules that specifically bind to human BCMA, conjugates comprising the BCMA binding molecules, and pharmaceutical compositions comprising the BCMA binding molecules and the conjugates. The disclosure further provides methods of using the BCMA binding molecules to treat cancers that express cell surface BCMA. The disclosure yet further provides recombinant host cells engineered to express the BCMA binding molecules and methods of producing the BCMA binding molecules by culturing the host cells under conditions in which the BCMA binding molecules are expressed.
Methods and systems for controlling the heading of a mining machine while the mining machine performs a cutting operation. One system includes a cutting system and a set of left and right tracks of the mining machine. The system also includes a lidar sensor mounted to the mining machine. The system also includes an electronic processor configured to receive the data from the lidar sensor. The electronic processor is also configured to determine a current heading of the mining machine based on the data received from the lidar sensor and compare the current heading to a target heading of the mining machine. In response to the current heading not being different from the target heading of the mining machine by a predetermined amount, the electronic processor is configured to control the mining machine to adjust the current heading of the mining machine.
An electronic device and method for taking a picture using the electronic device are provided. The electronic device includes a housing (1), a display screen (2) mounted on the housing (1), and a camera (3). The display screen (2) includes a first display region (21) and a second display region (22). The first display region (21) has a pixel density less than that of the second display region (22). The camera (3) includes a lens (31) facing toward the first display region (21). At least a part of the camera (3) is movable, such that the lens (31) of the camera (3) is movable in a plane parallel to the first display region (21). The lens (31) is configured to take at least two initial pictures at positions in the first display region (21) that are different from each other. A target picture free from pixels of the first display region (21) is synthesized based on the at least two initial pictures.
Title of the invention: SCANNING IMAGING PART, SCANNING IMAGING DEVICE, AND ELECTRONIC APPARATUS

Abstract:
A scanning imaging part may include a transparent body (110), a light blocking ink (120), a charged liquid droplet (121), and a microfluidic component (130). The transparent body (110) may include a first face (111) and a second face (113). An image sensor (114) may be arranged on the second face (113). The charged liquid droplet (121) may transmit a part of light incident from the first face (111) through the charged liquid droplet (121) to the image sensor (114). The microfluidic component (130) may drive the charged liquid droplet (121) to move in the liquid flow channel (112). Light incident from the first face (111) may be scanned via the charged liquid droplet (121) and form a scanning image by the image sensor (114).

No. of Pages : 39 No. of Claims : 15
Title of the invention: BRACKET STRUCTURE, INPUT/OUTPUT ASSEMBLY AND ELECTRONIC DEVICE

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Abstract:
An electronic device, an input/output assembly and a bracket structure are provided. The bracket structure includes a first bracket configured to hold at least two first input/output modules. The first bracket includes a first face, a second face and a third face. The first face and the second face are arranged on two opposite sides of the first bracket. The third face is connected to the first face and the second face. The second face is provided with at least two accommodating chambers. The first face is provided with at least two through holes corresponding to the at least two accommodating chambers. The third face is provided with a mounting hole passing through the first face and the second face. The mounting hole is arranged between two of the at least two accommodating chambers.

No. of Pages: 56 No. of Claims: 12
The surgical instrument (10) according to the invention comprises a jaw tool (16) with two branches (20a, 20b) that can be closed for grasping tissue. In order to transmit the closing force to at least one branch (20a, 20b), the branch (20a, 20b) is coupled with a preferably manually actuatable pull/push element (50), and, for coupling, an actuating pin (46) that supports a sleeve (70) interacts via the sleeve with a coupling track (65a, 65b; 66a, 66b), in which case the sleeve rolls off the coupling track (65a, 65b; 66a, 66b). In this manner, any deformation, abrasion or burr formation on the coupling track (65a, 65b; 66a, 66b) is prevented to such an extent that, even after numerous closing movements of the branches (20a, 20b), said branches can still be actuated unimpaired by any wear of the coupling track (65a, 65b; 66a, 66b) and the actuating pin (46), respectively.
A rotor is provided for an electric motor. The rotor shaft is located within a central opening of the rotor core. The central opening is sized larger than the rotor shaft such that a circumferential gap exists between the rotor core and the rotor shaft while the shaft is located by protrusions in the central opening of the rotor core. The circumferential gap is filled with a resin.
A drill device includes a base frame, a feed frame supported for movement relative to the base frame, and a feed device for inserting a drill element into a rock surface. The base frame includes a pair of fluid cylinders. The feed frame extends along a feed axis and includes a plurality of guide bars aligned parallel to the feed axis. The feed device is supported for movement relative to the feed frame in a direction parallel to the feed axis. The feed device includes a first guide member and a second guide member. The first guide member engages a surface of at least one of the guide bars, and the second guide member engages another surface of at least one of the guide bars.
The present disclosure provides an electronic device, a storage medium, and an image processing method, wherein, the electronic device includes a processing unit, a camera and a display screen covering the camera. Wherein, the display screen includes a light transmission area and a non-light transmission area, is configured to display a first image on the non-light transmission area under the control of the processing unit. The camera is disposed under the light transmission area, includes a projection assembly and an imaging assembly both electrically connected to the processing unit. The projection assembly is configured to project a second image on the display screen under the control of processing unit thereby to display the image on the light transmission area of the display screen, and the imaging assembly is configured to capture a third image through the light transmission area of the display screen.
The embodiments of the disclosure provide an Application (APP) preloading method and device, a storage medium and a terminal. The method includes that: when an APP preloading event is detected to be triggered, an APP to be preloaded is determined; whether a first APP which is being started in foreground exists or not is judged; and if NO, the APP to be preloaded is preloaded. According to the application, with adoption of the technical solution, not only low speed and non-fluency, caused by preloading the APP, for starting of the APP in foreground may be effectively avoided, but also a speed of preloading the APP to be preloaded may be effectively increased, so that a speed of starting the APP to be preloaded may be increased.

No. of Pages : 37 No. of Claims : 10
The present invention suggests a composition of a thermoplastic polyurethane sheet for bags or billfolds, in which a sheath of the bags or billfolds is manufactured with a TPU sheet, which is an environmentally friendly material and exhibits excellent physical properties, but not with a PVC sheet, which is an environmentally regulated material, whereby excellent elasticity and resiliency, which are original material characteristics of TPU sheets, solve the drawback in that it is difficult to form a part at which folding occurs to shape a bag or billfold and good formability (foldability) can be achieved without changing physical properties of TPU.

No. of Pages : 18 No. of Claims : 3
Title of the invention: SYSTEMS AND METHODS FOR MANAGING A WEIGHT OF A PLANT IN A GROW POD

Abstract:
An assembly line grow pod includes a seeding region, a harvesting region, a track that extends between the seeding region and the harvesting region, a cart including a tray for holding plant matter, and a wheel coupled to the tray, where the wheel is engaged with the track, and a weight sensor positioned on the cart or the track, where the weight sensor is positioned to detect a weight of the plant matter positioned within the cart.

No. of Pages : 17 No. of Claims : 20
Systems and methods for providing an assembly line grow pod are provided. One embodiment of a grow pod includes an exterior enclosure that defines an environmentally enclosed volume, a track that that is shaped into a plurality of helical structures defining a path, and a cart that receives a plant and traverses the track. Some embodiments include a sensor for determining output of the plant, a plurality of environmental affecters that alter an environment of the environmentally enclosed volume to alter the output of the plant, and a pod computing device that stores a grow recipe that, when executed by a processor of the pod computing device, actuates at least one of the plurality of environmental affecters. In some embodiments, the grow recipe alters a planned actuation of the at least one of the plurality of environmental affecters in response to data from the sensor indicating a current output of the plant.
# Abstract

Systems and methods for determining harvest timing for a cart within an assembly line grow pod include identifying a type of plant matter positioned within a cart, detecting at least one of a plant matter weight of the plant matter with a weight sensor, a plant matter height of the plant matter with a distance sensor, and a chlorophyll level of the plant matter with a camera, determining that the at least one of the detected plant matter weight, the detected plant matter height, and the detected chlorophyll level satisfies a harvest time parameters, and in response to determining that the detected plant matter weight, the detected plant matter height, and the detected chlorophyll level satisfy the harvest time parameters, directing the cart to a harvester system.
A pressure control system includes a sealed area containing carts for growing plant material, the carts movably supported on a track within the sealed area, an air pressure controller operably coupled to the sealed area such that the air pressure controller controls an air pressure within the sealed area, and a controller. The controller includes a processor, a data storage device storing one or more pressure recipes, and a non-transitory, processor-readable storage medium comprising one or more programming instructions stored thereon. The one or more programming instructions, when executed by the processor, cause the processor to: identify the plant material in the carts, retrieve a pressure recipe for the identified plant material from the data storage device, and direct the air pressure controller to adjust the air pressure within the sealed area based on the pressure recipe for the identified plant material.
A shaft grounding and monitoring system may include a grounding member slidingly engageable with a rotating shaft. An electrical sensor may be configured to be coupled with the grounding member in order to detect an electrical parameter that provides an indication of electricity flowing from the rotating shaft to ground through the grounding member. A processor may be operably coupled with the electrical sensor and may receive and analyze data from the electrical sensor at multiple sampling points taken at different rotational positions of the rotating shaft during multiple revolutions of the rotating shaft. The processor may be configured to develop over time a reconstructed waveform representing a compilation of the periodically sampled values of the data from the electrical sensor through one revolution of the rotating shaft.
Abstract:
Provided are a flexible insulated air duct and a modular flexible insulated air-duct system; said flexible insulated air duct comprises an air-duct main body (1); said air-duct main body (1) comprises an inner air-duct layer (5) and a heat-insulating layer (4) integrally formed on said inner air-duct layer (5); the inner air-duct layer (5) is arranged inside the heat-insulating layer (4), and the heat-insulating layer (4) is a rubber/plastic material. The modular flexible insulated air-duct system made by assembling a main air duct (7), a branched air duct (8), and a connecting air duct (9) may be rapidly connected on-site using a zip fastener to form an air-duct system having any configuration.

No. of Pages : 23 No. of Claims : 20
A launcher (300) for pawns (666) comprising: a chamber comprising a base (110) and a muzzle situated opposite to each other, wherein the chamber is configured to be loaded with the pawn (666), via the muzzle; a magnet secured to the base (110); a bolt adapted to slide within the chamber to a loading position; a spring confined between the bolt and the base (110), wherein the spring is adapted to be squeezed; wherein by loading the pawn (666) into the chamber the bolt slide against the spring thereby squeeze the spring to the load position, wherein the bolt is configured to be retained in the load position, and wherein external impact break the magnetic field thus release the spring for driving the bolt toward the muzzle.
A surface-treated steel sheet which is provided with a base material and a plating layer that is formed on the surface of the base material, and wherein the average composition of the plating layer contains, in mass%, 0.5-2.0% of Mg and satisfies (60.0 ≤ Zn + Al ≤ 98.0), (0.4 ≤ Zn/Al ≤ 1.5) and (Zn/Al − Mg ≤ 1.6).
Title of the invention: METHOD OF AND APPARATUS FOR INJECTING A LIQUID FORMULATION INTO A MOLTEN POLYMER

Abstract:
Injector (14) for injecting a liquid formulation into a molten polymer includes outlet (21) at one end and, at its other end, is arranged to be connected to upstream conduit (25) via a coupling housing (26) so that liquid formulation can pass from conduit into the injector, and further includes an elongate conduit (27) in which an elongate pin is slideably arranged being capable of expelling all liquid formulation from conduit. To address the risk the outlet could become blocked in use, whilst avoiding the need to depressurize and/or stop the flow of polymer in extruder (19), the injection apparatus includes a spool (34) which is rotatably mounted within wall (35) of the extruder and is arranged to be rotated about an axis which extends substantially perpendicularly to the elongate extent of the extruder through which a polymer stream (18) flows. The spool may be moved between a first configuration and a second configuration wherein a flow path is interrupted, but wherein molten polymer continues to flow in said polymer flow conduit.

No. of Pages: 27 No. of Claims: 22
The present invention provides an LGPS-based solid electrolyte production method characterized by having a step in which a mixture of Li3PS4 crystals having a peak at 420 ± 10 cm⁻¹ in a Raman measurement and Li4MS4 crystals (M being selected from the group consisting of Ge, Si, and Sn) is heat treated at 300°C to 700°C. In addition, the present invention can provide an LGPS-based solid electrolyte production method characterized by having: a step in which a mixture of Li3PS4 crystals having a peak at 420 ± 10 cm⁻¹ in a Raman measurement, Li2S crystals, and sulfide crystals indicated by MS2 (M being selected from the group consisting of Ge, Si, and Sn) are mixed while still having crystals present and a precursor is synthesized; and a step in which the precursor is heat treated at 300°C to 700°C.
The present invention relates to a liquid formulation of an anti-TNF alpha antibody, particularly adalimumab.

No. of Pages: 46 No. of Claims: 25
A bipolar battery plate for a bipolar battery is disclosed. The bipolar battery plate has a frame, a substrate positioned within the frame, a first lead layer positioned on one side of the substrate, a second lead layer positioned on another side of the substrate, a positive active material (PAM) positioned on a surface of the first lead layer, and a negative active material (NAM) positioned on a surface of the second lead layer. The substrate has a plurality of perforations, and a plurality of standoffs integrally formed on opposing side surfaces thereof. The first and second lead layers are electrically connected to each other through the plurality of perforations.
Disclosed is a synchronisation signal measurement method, comprising: a network device generates configuration information; the network device sends the configuration information to a user device, the configuration information being used for instructing the user device to utilise a measurement set to measure a synchronisation signal, the measurement set being used by a user device in a connected state to measure a synchronisation signal, the measurement set being a first synchronisation signal block (SS block) set, the number of SS blocks included in the first SS block set being less than the number of SS blocks included in a second SS block set, the second SS block set including SS blocks used by a user device in an idle state to measure a synchronisation signal, or the measurement set being a signal set, the signal set including a portion of signals among Y SS blocks, Y being a positive integer. Also provided is a related device. The present invention improves user device synchronisation signal detection performance.
Abstract:
Disclosed in the embodiments of the present application are a data transmission method, a terminal device, and a network device. The method comprises: a terminal device sends first control signaling to the network device, wherein the first control signaling is used to instruct the network device to allocate an uplink resource for buffered first uplink data and allocate a backup uplink resource for the terminal device; the terminal device receives second control signaling sent by the network device, wherein the second control signaling is used to indicate the uplink resource allocated for the first uplink data and the backup uplink resource; and if the terminal device has buffered second uplink data, the terminal device sends second uplink data to the network device on the backup uplink resource, the second uplink data being uplink data other than the first uplink data. The method, terminal device, and network device of the embodiments of the present application can improve system transmission performance.
A cooking apparatus is disclosed. The cooking apparatus includes a capacitance detector and a cookware detection controller. The capacitance detector is configured to detect capacitance using two or more electrodes arranged on one side of each of a plurality of induction heating coils. The cookware detection controller is configured to identify an induction heating coil corresponding to a position where cookware is placed among the plurality of induction heating coils when it is determined that the cookware is placed on a cooking plate based on the capacitance.