OFFICIAL JOURNAL
OF
THE PATENT OFFICE
INTRODUCTION

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

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

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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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पेटेंट अभिन्ययम, 1970 तथा पेटेंट (संशोधन) अभिन्ययम, 2005 वादन पेटेंट (संशोधन) नियम, 2006 द्वारा बांधित सभी आवेदन, सूचनाएं, विवरण या अन्य वस्तुकुल या कोई शुल्क पेटेंट कार्यालय के केवल उपयुक्त कार्यालय में स्थापित होंगे।
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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.
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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/01/2019

(43) Publication Date : 07/02/2020

(54) Title of the invention : A SYSTEM FOR UTILIZING DRAIN WATER BY DUAL STORAGE AND METHOD THEREOF

(51) International :H01M00100440000,G11B00170949000,G03G0015080000,A24D0003060000,B65D0006220000
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   No
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   Number :NA
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(62) Divisional to Application
   Number :NA
   Filing Date :NA

(57) Abstract :
The present invention relates to a system for utilizing drain or unutilized water by dual or multiple storage and its method thereof. More particularly, the present invention relates to a system and method for increasing the water recovery from 20 - 30% to 40 -100% with minimizing water waste by 1-99%. Refer to Figures 1-6.

No. of Pages : 24 No. of Claims : 12

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The method for mnemonic conversion of the test is initiated when the user enters a plurality of images (101) and save in a database of a computer readable program. The text matter is parsed, and a plurality of keywords are extracted through a keyword extractor (102-105). Then, one or more images are generated for the extracted keywords through a preferred method by using a correlation process (106-114). Further, a video is generated through a series of images generated for the extracted keywords (116-121). The generated images and the video are presented to the user (115). The user selects the presented images and video. The selected images and video is saved as preferred mnemonic translation for the entered text.
The present invention relates to a system that picks the heavy weight as well as light weight garbage, either dry or wet garbage. The device comprises of two spikes belts. The spike belt consists of large numbers of spikes, both spike belts rotates in opposite direction to one another. The one spike belt rotates in anticlockwise direction while other spike belt rotates in clockwise direction. The opposite rotation of spike belts provides the pickup action to any type/size of garbage with large storage capacity. The system has skilled art of separation of wet and dry garbage. The system can pick the heavy weight garbage for example domestic waste like food and kitchen waste, unused part of vegetable waste, fruit waste, fruit peels, medicine syrup glass / plastic bottle, glass milk bottles, jar, metal can, waste cloth, light bulb, battery cell, plastic water bottles, broken ceramic crockery, pieces of mirror and many more solid waste. The system can also pick the lightweight garbage such as polythene carry bags, pouches, wrapper, tree leaves and flowers, paper / plastic tea cups, paper or plastic food plates, tablet blisters, aluminum foils and many more. The system can also pick wet/ dry garbage (heavy or light-weight) and can separate them and store the wet garbage and dry garbage in separate compartment. The system can also pick fiber waste such as mesh of thread & human hair with continuous cleaning of spikes that provide jam free operation.

No. of Pages : 14 No. of Claims : 10
The present embodiment relates to a 3-D printed micro-filter system and a method for the printing of the 3-D printed micro-filter for the filtration of fluids. The 3-D printed micro-filter comprises the base stack layer (202) and the plurality of stack layers (204, 206, 208...n) comprising a plurality of rod members (102, 104, 106....). The plurality of stack layers (204, 206, 208....n) are placed over the base stack layer (202) at an angle being turned with reference to the preceding layer while keeping the extreme edge of the plurality of stack layers (204, 206, 208...n) with reference to the extreme edge of the base stack layer (202). The pore size decreases with the stacking of the plurality of stack layers (204, 206, 208....n) over the base stack layer (202), thereby enabling efficient filtration of the fluids. RefFig. 5

No. of Pages : 29 No. of Claims : 10
The present invention relates to a method and system for spectrum management for autonomous vehicular communication. The system of the present invention comprises of plurality of autonomous vehicles to send user profile data and spectrum request to plurality of Local Area Operators/Wireless Service Providers and plurality of Local Area Operators/Wireless Service Providers sending spectrum demand request to each other. The present invention provides an AI-based, linear programming and game-theoretic approach to cooperation between, and distributed spectrum management by, multiple wireless service providers (WSPs'). The advanced spectrum management system of the present invention is decentralized with independent artificial intelligence mechanisms in each Local Area Operators/Wireless Service Provider's domain. Reference: Fig. 3
A DEVICE FOR UNDERGEAR EXAMINATION OF TRAINS

The present invention provides a remotely operable device for inspecting the undergear of a rail vehicle. The present invention provides a remotely operable inspection device for inspecting the undergear of a train vehicle integrated with a plurality of modules such as an illumination module and image capturing module to capture images and videos of undergear parts of train vehicle for inspection and surveillance which is able to move on the uneven surface of track under train vehicle.

No. of Pages : 17  No. of Claims : 10
Title of the invention: CRITICAL THINKING ANALYSIS ON NIRF DATASET FOR 2016, 2017 AND 2018 IN CONTEXT TO HIGHER EDUCATION INSTITUTIONS (HEIS) IN INDIA

Abstract:
At present there exist in excess of 200 specialized colleges in India. To render quality instruction, the colleges need to focus on enhancement their quality on standard premise. For examination of this need of these organizations, the critical thinking process is required. The NIRF system has been taken as a benchmark. In light of classifiers, for example, Bayes, Function, Tree, a thorough scientific procedure of critical thinking was completed, for both administered occurrences channels like class-balancer and resample. Choice Stump order demonstrate was found to give better outcomes when contrasted with MultiLayer Perceptron and LMT. Along these lines it is suggested that before applying for NIRF positioning, colleges may foresee their positioning/accreditation status utilizing this critical thinking based choice stump grouping expectation display. The mentioned near table infers that decision stump classifier gives preferred outcomes over others and every single credits conveys level with load to make the inner evaluation advantageous to gain better positioning in NIRF for Organizations.

No. of Pages: 5  No. of Claims: 1
Title of the invention: A PROCESS FOR THE PREPARATION OF EPOXY ESTER RESIN

Abstract:
The present disclosure relates to a process for the preparation of epoxy ester resin. The epoxy ester resin obtained by the process of the present disclosure is radiation curable, stable, color-free and odor-free.

No. of Pages: 23  No. of Claims: 16
The present invention is an apparatus as well as a method for collecting undisturbed samples of soil. A typical apparatus comprises of a ring-holder that is tapered to provide smooth insertion into soil and a sampling-ring that also has a tapered edge, and places itself into the said ring-holder. The wall of such a soil sampler causes minimum disturbance to the soil during the sampling process. Further a method of collecting soil sample is provided that comprises the steps of inserting a sampling-ring in a ring-holder with tapered end outside, connecting the sampler to a sliding hammer or to a rod extension, giving gentle blows to the sampler unit, stopping such blows when the soil surface reaches the marking; and removing the sampling ring from the ring-holder to trim-off the excess soil, such as to obtain volume of soil mass equal to that of sampling-ring.
Title of the invention: A SYSTEM AND A METHOD FOR IDENTIFICATION OF PETROLEUM PROVINCES THROUGH MICROGRAVITY

Abstract:
The present invention provides for a system and a method for identification of petroleum provinces through microgravity. The present invention provides for a computation engine (118) configured to receive a gravity field data and a 3-dimensional (3-D) positioning data. The present invention provides for a system and a method for computing bouguer anomaly values from the gravity field data and the 3-D positioning data. The present invention provides for a system and a method for computing residual anomaly values by applying a wavelength filter on the bouguer anomaly values to identify low gravity zones. The present invention provides for a system and a method for computing gradient anomaly values from the bouguer anomaly values to identify high gradient zones. The present invention provides for a system and a method for identifying hydrocarbon provinces based on the identified low gravity and high gradient zones.
A media player for displaying content from a video server, the media player comprising, a display means to display a user interface of the media player, a memory configured to store a plurality of instructions, a Central Processing Unit (CPU) configured to execute the plurality of instructions to display the user interface, the user interface comprising a plurality of selectable buttons to select a video linked to each of the plurality of selectable buttons on the display means, wherein each of the plurality of selectable buttons is linked to a video, play a first video linked to a first selectable button on the user interface of the media player, detect a first selection of a second selectable button of the plurality of selectable buttons by the user for viewing a second video of the second selectable button, store a current play position in a time frame of the first video in the memory, and play the second video linked to the second selectable button, wherein the media player is configured to play the first video from the stored play position based on a second selection of the first selectable button. Fig. 2
Disclosed is a system (102) for determining a location of an explosive device. The system (102) detects an explosive device using one or more devices (204) based on one or more nano-explosive detection sensors (206) associated with the one or more devices (204). The system (102) further identifies a type, a quantity and a signal strength associated with the explosive device. The system (102) computes a distance between the explosive device and the one or more devices (204). The system (102) determines explosive device co-ordinates based on the computed distance and device co-ordinates associated with each device (204). The system (102) receives a data packet comprising data associated with the explosive device from the one or more devices (204). The system (102) determines a location of the explosive device based on an analysis of the data packet received from the one or more devices (204). [To be published with Figure 2C]

No. of Pages : 28 No. of Claims : 16
The present invention is related to system and method for assisting in communication for deaf-mute person. The objective of present invention is to solve the anomalies presented in the prior art techniques related to sign language to voice and vice versa conversation systems for communication for deaf-mute person.

No. of Pages : 19  No. of Claims : 7
Disclosed is a system (102) for executing a test case. The system (102) comprises a memory (206) and a processor (202). The system (102) receives a test file in a predefined format. The test file comprises a test case comprising one or more test steps, test data and one or more expected results for execution. Further, each test step from the one or more test steps indicates an action to be performed for executing the test case. The system (102) generates one or more tokens by classifying text associated with the one or more test steps. The system (102) generates an output template associated with the test case based on analysing the one or more tokens. The system (102) executes the test case based on one or more controls associated with the test case in the output template. The one or more controls are dynamically identified from the output template. [To be published with Figure 2]
**Title of the invention:** IMPROVED HAND OPERATED EMBROIDERY TOOL FOR EASY OPERATION

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**Abstract:**
The present invention is related to an improved hand operated embroidery tool (100). The objective of present invention is to solve the anomalies presented in the prior art techniques related to operation of the hand operated embroidery tool. The presented hand operated embroidery tool (100) is very easy to operate and low in cost. Refer Figure 1

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The present invention is related to design of rectifying antenna for microwave wireless power transmission. The objective of present invention is to solve the anomalies presented in the prior art techniques related to design of rectenna for microwave wireless power transmission.
The present invention relates to a method and a system for just in time manufacturing of garments. The method includes creating one or more square inch print pattern designs on a fabric. Further, the method includes coding the one or more square inch print pattern designs. The method further includes converting each of the coded one or more square inch print pattern designs into a tile. Further, the method includes wrapping the tile on a garment for creating a design, wherein the design and the fabric are selected by a user. Thereafter, the method includes cutting the fabric having the design, and thereby stitching the fabric for manufacturing the garment. 

«Fig. 1»
The idea for this artificial glove struck for the betterment of the deaf and dumb people in the society. According to the Indian National Association for Deaf around 18 million people are deaf in India out of which most are kids. There are many medical aids provided to them but still they are not efficient enough to provide them relief. In addition to this there are people who loose their power of hearing and speech after any mishap or accident. In such cases the person has to reform his all old habits and learn a arbitrary language that he can use to connect to the world. So, to remove such gap and reduce the task of learning a language, I have designed a hand glove which uses daily life gestures and can be reformed and formatted according to ones own needs. Science has proved to be a helping hand for humans for long years and so our project deals to be as simple in use and follows a trainable environment.

No. of Pages : 10 No. of Claims : 9
The present disclosure relates to a controlled-release enamel adhesive device for treating dental caries primarily caused by Streptococcus mutans. The device being capable of being adhered strongly to the tooth enamel onto the dental cavitation lesion and capable of being loaded with a drug, preferably an antibiotic and is biodegradable and releases the drug over a prolonged period in oral cavity. The individual film of the device is formed of cellulose acetate phthalate (CAP) and poloxmer 407 (P407) polymers and further the stacked films were coated with chitosan to impart unidirectional drug release and neutral taste. The device is capable of being applied by self etch and rinse method.
In this invention, the main focus is to investigate different types of machine learning classification algorithms and show their comparative analysis so as to propose the best classification algorithm which gave the highest accuracy in predicting and diagnosing GDM. It is of critical clinical and biological interest to understand what factors affect GDM (and in what capacities), so that they can be treated or avoided accordingly, hence saving two individuals, that is, the mother and the child from getting diabetes. In order to achieve this, we have used Sci-kit Learn and Keras to analyze the characteristics which are instrumental in the onset of GDM. We used classification algorithms such as Logistic Regression, Support Vector Machine, K-Nearest Neighbor, Decision Tree and Na"ve Bayes to perform the classification. We then used ensemble methods, which included Bagging, Boosting and Voting methods to create a hybrid algorithm which was supposed to increase the accuracy of the already available classification algorithms which we have used in our patent experiment design.

No. of Pages : 18 No. of Claims : 4
For the past few years, cloud computing has been grabbed considerable attention in improving the business world by providing organization with innovative ideas to save money, improve operations and gain access to the next generation application. Mobile cloud computing platforms represent a more secure way for provisioning applications and online services to users over social networks. Security and privacy preservation is the main expectation of the cloud users in Mobile based cloud servicing. Cloud storage provides a convenient means of storing and retrieval of huge amount of data. Personal Health Records (PHRs) should remain the lifelong property of patients and should be displayable conveniently and securely to selected caregivers. MyPHRMachines a patient centric system that takes a radically new architectural solution to health record interoperability. Patients Can Upload their Medical data then they access and share through remote Virtual machine. This invention invades various methods of medical data uploading in cloud. Also this invention, addresses the issue of cloudlet creation and secured submission of encrypted file in cloud for years together.

No. of Pages : 16 No. of Claims : 4
Title of the invention: PROCESS FOR COST EFFECTIVE DISPOSAL AND CONVERSION OF APPLE POMACE INTO PURE ORGANIC AND LIQUID MANURE.

Abstract:
The present work of invention relates to development of process and method of conversion of apple pomace having acidic pH to organic and liquid manure rich in mineral, vitamins, omega fatty acids which can substitute use of any chemicals in any form for any type of crop. It further relates to method for provision of heat by fermentation of fruit waste. It can substantially reduce the mesothermic phase of composting process. The following invention provides development of a Nobel cost effective and eco-friendly method for treatment of waste from fruit processing plant. Every year fruit processing plant produce tons of waste which if not managed scientifically will evntutilly find its way to dumping grounds or water bodies located in the vicinity of the fruits processing plants. The waste procedure from the fruit processing plants can't be used as such as manure because it's acidic pH and hence it degrades and leads to air, water or soil pollution. So, the present invention can rectify or address this problem in more scientific way and the bio-products of the waste materials thus produced is useful as a nutrient rich manure or organic manure. The bio-product hence produce is free from any chemical order with the help of present methodology/technically. The processing time for conversion of waste to nutrient rich manure is reduced several folds as compare to conversional methods.
Pollution created by plastic material is of concern these days. The plastic bottles are generally used in market for selling mineral water, cold drinks and juice. Afterwards, these bottles are thrown in dustbins and at times such bottle litter in an open space, creating plastic pollution. These empty plastic bottles occupy lot of space in dustbins and so, managing such a waste is of concern these days. A solution to this problem is to reduce the size of this waste plastic bottle. The existing design of plastic bottle cutter has two variants - (1) to crush the bottle to a reduced size, and (2) to slice the bottle into small pieces. In the first case, the weight of the crushed bottle will remain the same as that of the uncrushed bottle. In the second case, the machine has complex design and consumes good amount of energy as a single blade moves a number of times to cut the entire bottle into small pieces. To overcome these drawbacks, a novel conceptual design for the cutter and the machine for bottle cutting are proposed. In this new design, the cutter will have multiple blades. We have designed this cutter for plastic bottle of approximately 230 mm in length and 70 mm in diameter typically like that of a 500 ml cold drink bottle. This cutter will cut the empty bottle into five pieces in a single stroke. In this conceptual design, we have also made a provision to segregate the plastic pieces into two categories - (1) the plastic part containing the cap, which can be used for constructing the pavements or road sides, and (2) the rest part of the bottle, which can be mixed with the raw material used for the construction of roads, or manufacturing recycled products. Such a design can be made flexible for different sized plastic bottles.
The Magic Carpet is a novel conceptual design of a product that adds a feature to enhance its utility by illuminating the carpet in the dark. This 'magic carpet' has LED lights installed sideways to it which illuminate when someone keeps the foot on it. The product is of great utility especially in case of children and elderly people during the night time. At times it is difficult for them to turn on lights in their room in the dark, if they wish to use washroom or in the case of emergency at night. In this case, our product comes very handy as it gives out light and shows the path, without switching on any external power source. The 'magic carpet' will have five layers - consisting of an anti-slip layer, layers of foam for circuit protection & providing safety to the person walking on it and the cloth layer for adding decor to the carpet. The circuit will use piezoelectric cells, which converts the pressure of the footfall to electrical energy. This circuit will prove to be energy efficient as we are not using any external source of energy and the energy produced by piezoelectric cells is a clean source of energy. The use of LED lights makes the product cost efficient, long lasting and safer, in comparison to the use of incandescent lamps.
The present invention provides a polyurethane based printing ink for improved polypropylene (PP) or Polyethylene (PE) extrusion lamination for central impression (CI) flexographic application. The printing ink composition comprises a polyurethane, a varnish, an aromatic hydrocarbon free organic solvent, a colourant, and at least one additive. Also the present invention provides a method for producing a printed article using the provided ink composition of the present invention that exhibit excellent lamination bond strength irrespective of the lamination is carried out with either solvent base or solvent-free lamination adhesives, excellent printability, adhesion, smearing and blocking resistance properties on various substrates including biaxially oriented polypropylene (BOPP), chemical coated polyethylene terephthalate (CC PET), corona treated polyethylene terephthalate (CT PET) films.

No. of Pages : 20
No. of Claims : 10
Title of the invention: NECKWEAR FOR DISPLAYING COINS, MEDALS OR BARS

Abstract:
A neckwear includes a neckband and a neckband module and may further include one or more fastener members and one or more display segments for coins, medals or bars. The neckband is connected to said neckband module, and said one or more fastener members pivotably connects said neckband module and said one or more display segments. Also provided for a neckwear are a hermetically sealed neckband module or display segment, a display segment configured to be intra-changeable, display inserts for a neckband module or display segments, torso segments, and a neckband module with a member of a fastener to accommodate interchangeable display segments.
The present disclosure envisages a smart barrier (100) configured to be mounted along a road. The barrier (100) comprises a pair of operatively horizontal shock resistant rails (12), a plurality of spaced apart rollers (14), a plurality of operatively vertical hollow posts (10) and a plurality of collision detection units (101). The plurality of spaced apart rollers (14) is supported between the rails (12). The plurality of operatively vertical hollow posts (10) is axially passing through each of the spaced apart rollers (14) into ground. Each of the rollers (14) is configured to rotate about vertical axis of each of the hollow vertical posts (10). Each of the plurality of collision detection units (101) is configured to generate evidence and location details corresponding to the detected collision.
**Title of the invention :** NOTIFICATION SYSTEM WITH USER CONSENT AND CONTROL

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<tr>
<th>International classification</th>
<th>Name of Applicant</th>
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<td>:H04W 24/00</td>
<td>1) I-CUBE ACCESS GLOBAL PRIVATE LIMITED</td>
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| Priority Document No         |
|------------------------------|-------------------------------|
| :NA                          | Address of Applicant : FF105, Mangaldeep Apartment, Sampatrao colony, Alkapuri, Vadodara Gujarat India |

| Priority Date                |
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| :NA                          | 1) PATEL Kaushal               |

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| Filing Date          |
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(57) **Abstract :**

NOTIFICATION SYSTEM WITH USER CONSENT AND CONTROL - The present invention embodies Notification System with User Consent and Control. Said notification system (P) that provides full control with respect to content of notifications being played on their communication devices and over the users. Present system (P) also provides interactive platform for the system that allows customization, personalization and individualization without dependency on the service providers. The present Notification system (P) with user consent and control mainly comprises of: Calling Device Module (Cing) Called Device Module (Ced) Notification Module (NM) further comprising of: o Platform Management (PM), o Storage Element (SE), o Processing means (PR), o User Management (UM), o Device Management (DM), o Content Management (CM), o Service management (SM). Fig. 1

No. of Pages : 106 No. of Claims : 8
### SMART CALCULATOR

**Abstract:**
A smart calculator (100) for performing payment transactions as well as arithmetic and numeric calculation, is provided herein. The smart calculator includes a display unit (102), a transaction unit (106), a control unit (108), a processing unit (109) and a memory unit (103). The display unit (102) is configured to display an output related to one or more payment transactions performed by the smart calculator (100). The transaction unit (106) includes a number of user-actuatable buttons (202, 204, 206, 208, 210, 212, 214, 216) corresponding to a plurality of modes of payment transactions. The control unit (108) includes a number of user-actuatable buttons for performing arithmetic and numeric calculations. The processing unit (109) is configured to selectively perform one or more of the payment transactions or arithmetic and numeric calculations based on a user input received via one of the transaction unit (106) or the control unit (108).

**Title of Invention:** SMART CALCULATOR

**International Classification:**
- G06F00150000
- G06Q00204000
- G06Q00203200
- G06Q00200600
- G06Q00202000

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**Filing Date:** NA
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**Patent of Addition Number:** NA
**Filing Date:** NA
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**Filing Date:** NA

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No. of Pages : 24 No. of Claims : 9
**Title of the invention**: A THERMAL EVAPORATION SYSTEM FOR SEPARATING SOLUTE FROM A SOLUTE-SOLVENT MIXTURE

<table>
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<tr>
<th>Abstract</th>
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| ABSTRACT A THERMAL EVAPORATION SYSTEM FOR SEPARATING SOLUTE FROM A SOLUTE-SOLVENT MIXTURE

Disclosed is a thermal evaporation system comprising an evaporator module, an effluent tank, a dryer, and a recirculation conduit. The evaporator module is configured to concentrate a solute-solvent mixture by evaporating solvent from the mixture to provide a concentrated solute-solvent mixture of a first concentration, wherein the first concentration is up to 40% dry. The effluent tank is configured to supply the solute-solvent mixture to the evaporator module. The dryer is configured to further concentrate the concentrated solute-solvent mixture of first concentration and provide a solute-solvent mixture of a second concentration, wherein the second concentration is up to 100% dry. The recirculation conduit is configured to recirculate vapours generated by the dryer within the thermal evaporation system. The system is more energy-efficient and has lower steam consumption. |

No. of Pages : 54
No. of Claims : 15
Title of the invention: AN ADDITIVES COMPOSITION FOR NATURAL HYDROCARBON-BASED FUELS.

ABSTRACT
An additives composition for natural hydrocarbon-based fuels comprises at least one C1-C9 alcohol, C3-C12 alkanes, and catalyst. The present invention also discloses composition wherein 5 to 40 percent by weight of C1-C9 alcohol, 10 to 70 percent by weight of C3-C12 alkanes; catalyst for additives is 1 to 10 presents by weight and 5 to 20 percent by weight of cycloalkanes. The present invention relates to additives composition for natural hydrocarbon-based fuels further discloses method of fuel formation and use of fuel composition thereof.

No. of Pages: 37 No. of Claims: 11
A GEL BASED ON THERMOPLASTIC ELASTOMERS AND METHOD OF MAKING THEREOF

The present disclosure relates to a gel material made of thermoplastic elastomers. The thermoplastic elastomers content in the gel material is very less. Even after the reduction of thermoplastic elastomers, the gel material has superior properties. The gel material of the disclosure is cost effective and has good strength. The present disclosure also relates to a cushioning material made of gel of thermoplastic elastomers. Furthermore, the present disclosure also relates to a process for making the gel and the cushioning material.

No. of Pages : 26 No. of Claims : 16
The Patent Office Journal No. 06/2020 Dated 07/02/2020

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(54) Title of the invention : PROCESS FOR STABILIZATION OF BACTERIAL PROTEIN AND ITS USE IN VACCINE MANUFACTURING THEREOF

(31) Priority Document : 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

(57) Abstract:
Abstract Process for stabilization of bacterial protein and its use in vaccine manufacturing thereof The present invention relates to preparation and stabilization of proteins during storage. The present invention addresses the issue of short shelf life of monomeric toxoids to be utilized as either as an antigen of monovalent/multivalent/combination vaccines or carrier protein for polysaccharide-protein conjugation. The present invention particularly provides methods for stabilization of proteins during storage, wherein proteins with minimum aggregates/dimers can be obtained, in order to manufacture efficacious, potent, stable vaccines with improved homogeneity.

No. of Pages : 52 No. of Claims : 70

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The Patent Office Journal No. 06/2020 Dated 07/02/2020

(54) Title of the invention: CLOTHES WASHING MACHINE WITH IMPROVED CLEANING METHOD

(51) International classification: D06F 35/00
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(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:
7. ABSTRACT OF THE INVENTION CLOTHES WASHING MACHINE WITH IMPROVED CLEANING METHOD A WASHING MACHINE THAT USES THE TURBULENT CIRCULATION OF DETERGENT FLUID BY MEANS OF A PUMP AND A SPARGE EQUIPMENT, ALONG WITH SUCKED AIR, TO EFFICIENTLY CLEAN THE CLOTHES WITHOUT SUBJECTING THEM TO WEAR AND TEAR AS IN CONVENTIONAL WASHING MACHINES THEREBY SAVING THE CLOTHES TIME AND ENERGY. THE WASHING MACHINE WILL BE MANUFACTURED WITH AUTOMATIC OR MANUAL CONTROLS AND BE AVAILABLE WITH A SPIN DRYER OR A VACUUM DRYING SYSTEM, AS WELL AS A HAND PUMP FOR USE WITHOUT ELECTRICITY.
TITLE: HIGH SPEED SPINNING TOY TOP

ABSTRACT

The high-speed spinning toy tops of present invention comprises rotor assembly, stator assembly and launcher assembly or modified launcher assembly optionally power source and other required components. These toy tops are characterized to have at least two speeds the first before launch and second at launch, they spin with very high RPM and generates engaging sound. For increasing the speed of the rotor from first speed to second speed either field weakening principle or principle of gyroscopic effect is used. Launching of rotor is done by completely sliding out the rotor axially or radially from stator or modified launcher assembly. Toy tops are simple and faster to manufacture by using conversion technique which includes selection, modification and assembly of components. The invention also provides the kit comprising the components to make said toy top.

No. of Pages : 71  No. of Claims : 43
Noninvasive Blood glucose Estimation by Photoplethysmography using Single Pulse technique with Cepstral coefficients is implemented using Cepstral based single pulse technique. An IR sensor based data acquisition system is used to record the PPG signal of subjects. The main contribution of this invention is exploring various features of a PPG signal using Single Pulse Analysis technique for effective estimation of BGL values. Neural network is trained using feature sets and BGL value estimation is performed. This technique with 24 feature set is a good choice for the implementation of system for measurement of noninvasive glucometer. The Single Pulse techniques overcomes the limitations of time varying nature of the PPG signal. Cepstral domain single pulse features shows high correlation in BGL value estimation in terms of R², Spearman, Pearson correlation coefficient as well as Clarke error grid analysis and can be the considered as a reliable feature set for BGL estimation.
The present invention relates to a voice controlled wheel chair operating system. The object of the proposed invention is to provide a wireless wheelchair control system which employs a voice recognition system for triggering and controlling all its movements like move forward/move back/move left/move right or stop. The wheelchair responds to the voice command from its user to perform any of these movements. Herein user is able to operate the wheelchair by simply speaking to the wheelchair microphone. In case of voice failure wheelchair is going to operate using android app. Automatic obstacle detection is done using an ultrasonic sensor, which helps to apply a sudden brake and also inform to user about obstacle’s distance from wheelchair. Following invention is described in detail with the help of Figure 1 of sheet 1 showing the block diagram and Figure 3 of sheet 2 showing the flowchart of voice operated wheelchair.
The present invention relates to a image/video defogging method, comprising the steps of capturing a real time video of a degraded environment, wherein the environment is degraded by presence of suspended particles, pre-processing the video by compressing size of the video for enhancing the computation speed, evaluating a gradient value from the pre-processed video for detecting a set of parameters in order to remove fog, estimating an atmospheric light value and a transmission map based on the gradient value, applying a hybrid filter on the transmission map to refine quality of the pre-processed video, restoring visibility in the refined video by eliminating a distortion from the refined video and analyzing the de-hazed video for predicting an amount of suspended particles present in the degraded environment.
A remotely operated, self-locking fixing mechanism for wall mounted equipment in contaminated enclosures, the mechanism comprising a stationary unit (8) operably mounted on an inside surface of a wall port (10) of a wall of the enclosure, said unit (8) being adapted to receive a mobile unit sub-assembly holding the wall mounted equipment (5). The mobile unit sub-assembly comprises a fitting holder (2) adapted to engage with a fitting of the wall mounted equipment (5) and an annular compression disk (3) adapted to be aligned in line with an annular cover plate (4), to engage a guide rod (9) for remote locking of the mobile unit sub-assembly holding the wall mounted equipment to the stationary unit. Figures 1 and 2.
Abstract:
A solid gasket and a leak-proof flange and gasket assembly thereof for penetrations into an isolated enclosure has been described. The flange and gasket assembly comprises a main flange (1) having a cylindrical bore (2) for receiving a pipe wall embedment (33). The assembly comprises a counter flange (22) having a cylindrical bore (23), which extends into a radially tapered zone to form a conical cavity (25), wherein the conical activity (25) engages a solid gasket (11). The solid gasket (11) comprises a first face side (12) radially tapering to a second face side (13), and the second face side (13) have a lesser cross-sectional area than the first face side (12), and an outer tapered surface (14), which extends from the first face side (12) to the second face side (13) and the tapered surface (14) has a contoured protrusion (15) abutting the face side (13), and holes (17) to facilitate passage for cables (30). The counter flange (22) with the solid gasket (11) fitted therein the conical cavity (25) engages axially within the cylindrical socket (3a) of the main flange (1) and is fitted therein by means of a plurality of fasteners (31, 32). Thus, the required leak tightness is achieved without the use of any adhesive or any other secondary medium.
Title of the invention: ONE-POT SYNTHESIS REACTION METHOD FOR OBTAINING 3-SUBSTITUTED ALKYLATED INDOLE DERIVATIVES

Abstract:
The present invention relates to one-pot reaction synthesis reaction method for obtaining 3-substituted alkylated indole derivative products includes catalyzing substituted salicylaldehyde, barbituric acid and indole by adding [Hmim]HSO4 catalyst in an acetonitrile solvent at a reflux condition. Fig. 1

No. of Pages: 30  No. of Claims: 10
IDENTIFICATION AND AUTHENTICATION SYSTEM FOR DIAMOND AND OTHER GEMSTONE WITH NFC AND OTP

Abstract:
ABSTRACT IDENTIFICATION AND AUTHENTICATION SYSTEM FOR DIAMOND AND OTHER GEMSTONE WITH NFC SMART CARD is relates to an authentication device and method using an NFC authentication card, with an authenticating an OTP at the back of smart card for updating the final product. The NFC activated smart phone will detect the smart card and provides the required information after scanning the NFC tags. It will led to the E-guide, This E-guide provides authentic information about your diamond, starting from the formation of it from earth to a beautiful dream jewelry piece and for OTP user have to scratch the back side of NFC smart card and after verifying the same through OTP and DDH ID its further granting access rights to final jeweler so he can update the final product details which shown in Fig 1

No. of Pages : 19 No. of Claims : 7
ICM-CLEANING : INTELLIGENT CAR CLEANING METHOD

ABSTRACT
This invention ICM-Cleaning* is related to fastest technique to clean up the car in shortest time with economical rate. This invention ICM-Cleaning is extensively useful to cleaning the vehicles in proper way with lesser time to get going on road. This car washing plant is equipped with mechanism, plc™s and pneumatics all parts are controlled through control panel. In plant the car is washed defined procedure in which six procedure takes place. The first step the prewashing of car is to be done to remove all residues from the surface of the car by pressure washing process. Foam washing process then starts by spraying liquid soap Foam on the surface of the vehicle. The assembly of roller which are installed in system will be governed by lead screw mechanism to slide the rollers over the vehicle surface profile to be cleaned. The cleaning by rollers are ensured by driving the rollers 1.5hp wormed geared motor with gear ratio of 1:15. The rollers are made up of cotton, nylon threads. The direction of rotation of rollers are taken care so as to ensure that used water droplets will throw out in the backward direction. There after high velocity water jet sprayed to remove all foam stickiness from the surface of the vehicle. After cleaning with water jet, the extra water particles are completely removed with the set of high velocity air nozzles over the vehicle surface. In this section the vehicle is passing through high velocity air jet nozzle with an angle of 32 to 35-degree backward inclination so as to ensure that water droplets do not interfere with further process the high pressure is generated with the help of reciprocating compressor using 3hp motor. The water to be used in the plant at various section are governed by double acting reciprocating water pump of 3.5hp motor. To carry out all the steps for washing of car a belt conveyor system is to be use to move the vehicle through the plant. The complete plant will be controlled by PLC to control all the parameters to be required as per various categories of vehicle such as length, width, height, surface curve, wheel base, wheel diameter, frontal and rear bumper lengths, side mirror dimensions, etc. to completely hazard(gerch)/free cleaning of vehicle.
Title of the invention: SURVEILLANCE AND REAL TIME MONITORING SYSTEM FOR UNDERGROUND MINERS

Abstract:
Underground mines are more threatening in nature and contain insecure zones for their workers. There is the need to develop a strong, safe, reliable and low cost surveillance and safety system in underground mines. This invention presents an inexpensive, low power wireless mobile sensor network real time monitoring system for underground mines, developed by using the Long Range Radio protocols based wireless data transfer system. The system includes a small board incorporating all sensors designed for monitoring the underground environment and a Long Range transceiver module for safe and reliable wireless data transfer from the sensor network. Information transferred through routers and coordinator received by the terminal emulator which helps in displaying the real-time data and alarm generation in case of exceeding the limit.

No. of Pages: 23
No. of Claims: 5
Title of the invention: CLUTCH PLATE WEAR INDICATOR FOR VEHICLE

Abstract:
Clutch system is the main system included in the vehicle. Clutch is a mechanical device located between a vehicle engine and its transmission. Many times vehicle breakdown occurs due to clutch plate failure, mostly due to clutch plate wear. We have undertaken this project to design an indicator which determines the wear of clutch plate and signals ECU when critical limit of clutch plate wear is reached. This ensures there is no breakdown of vehicle and safety of vehicles and passengers is ensured. When we talk about clutch plate wear, thermal consideration is the most important agent that comes into picture. At the contacting surfaces of the clutch plate system, high temp, occurs due to relative motion between these parts during the sliding period. These high temperatures are responsible for several disadvantages such as increasing wear rate, surface rack and permanent distortions. This results in easy failure of clutch system. Failure here means torque transmitting capacity of clutch system which reduces. Thermal deformation and elastic contact will change the constant pressure distribution. In order to keep the friction system in the stable zone, it should avoid thermal failure reasons such as excessive sliding speed, wrong selection of friction material, etc. Considering all the factors and problems mentioned above, we will design a clutch plate wear indicator for the same.

No. of Pages: 10
No. of Claims: 3
INDICATION CIRCUIT FOR OVERLOADED VEHICLES

ABSTRACT The growth of every country's economy is measured by the growth of its transport infrastructure. With the gradual development of economy, the scale of transportation industry continues to expand. The problem of overload in the vehicle transport has emerged. Therefore, how simple and conveniently to know the vehicle load and how to effectively limit overload has become a key issue. Vehicle load control system integration device can detect conveniently vehicle load to prevent overloading of vehicle and improve vehicle safety and it can effectively reduce heavy work of the vehicle load testing station and improve work efficiency in transport sector. Trucks exceeding the legal mass limits increase the risk of traffic accidents and damage to the infrastructure. They also result in unfair competition between transport modes and companies. It is therefore important to ensure truck compliance to weight regulation. New technologies are being developed for more efficient overload screening and enforcement. Much progress has been made recently to improve and implement intelligent overloading detection system which can contribute to safer and more efficient operation of trucks. This situation is aggravat by steep downhill slopes and sharp curves. On steep uphill gradients where no climbing lane is provided, the slow moving heavy vehicle causes traffic disruption. Traffic accidents caused directly or indirectly by overloaded heavy vehicles are normally not included when the total cost to the country, caused by overloading, is calculated.

No. of Pages : 9 No. of Claims : 3
Title of the invention: FUEL ASSURITY SYSTEM FOR AUTOMOBILES

Abstract:
The main purpose of this invention is to work on the topic which will be useful in today's world for improvement in the technologies. There are many fields were all of them are looking to improve the current working systems. So while looking for different topics we found that there was NEWS from Uttar Pradesh published in India Now, where the government officers were send to petrol station for Inspection purpose. Officers found that there was a special chip which can be controlled by the remote and can be accessed whenever required. This tiny device replaces the original gadget to manipulate deliveries. Basically this chip works by speeding up the meter reading and giving the customer less amount of fuel. Fuel tank which currently measures and give us the display of analog type is not up to mark. The current fuel tank is not able to cope up with current technology. So to get mixed up with current technology we designed a tank which is having a digital display and will give us an accurate result with the help of sensors and different electronic circuits. The proposed project work has aimed for developing a feasible low cost automation technique to measure the fluid level and its quantity. We can achieve least possible error and maximum accuracy in the measurement. We are designing a system which digitally displays the level of liquid inside the tank. Thus it is an efficient device made by keeping in mind the petroleum thefts at the various petrol pumps at the time of filling of tank.
This invention presents a parallel ignition locking system using Bluetooth Low Energy Microcontroller board which can be controlled via smartphone application and a hardware key with combination of RFID tag. The system includes a hardware and software combined assembly. A RFID key or Smartphone via application can change ignition state from lock to on and off and vice versa. A safety mechanism shield is engaged to prevent accidental locking during power failures.
**Title of the Invention:** A METHOD OF PRE-HEATING OF SOY BEANS BEFORE FINAL COATING WITH PREDETERMINED FLAVORS

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<th>International Classification</th>
<th>Name of Applicant</th>
<th>Name of Inventor</th>
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<td>G01N0033533000,H05B0031000000,B01J0020286000,C02F0003280000,B63C0007260000</td>
<td>1) Rekha Sunil Mulay</td>
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**Abstract:**

ABSTRACT A METHOD OF PRE-HEATING OF SOY BEANS BEFORE FINAL COATING WITH PREDETERMINED FLAVORS

The present disclosure discloses a method of pre-heating of soy beans before final coating with predetermined flavors. The present disclosure may best suit to whole soy beans and not halved soy beans. The said method further comprises of different stages of pre-heating such as sorting, soaking, dehydrating, and roasting of the soy beans. The roasting stage may further comprise roasting in four cycles. The said four cycles may further involve roasting for varying time period at different set of temperatures predetermined. Post roasting, the soy beans may be subject to the coating stage. The coating stage differs based on kind of flavor which is to be put such as chocolate, Jaggery, Indian spices etc. To be published with figure 1

No. of Pages: 15  No. of Claims: 10
(54) Title of the invention : PREPREGS AND FILM/SHEET COMPOSITION

(51) International :C08J0005240000,C09D0175040000,B32B0037140000,H01L0023498000,B32B0037260000
classification

(31) Priority Document :NA No

(32) Priority Date :NA

(33) Name of priority country :NA

(86) International Application :NA No

Filing Date

(87) International Publication : NA No

(61) Patent of Addition to Application :NA No

Filing Date

(62) Divisional to Application :NA No

Filing Date

(57) Abstract :
ABSTRACT PREPREGS FILM SHEET COMPOSITION The present inventions relate to reactive systems pre-impregnated with different functional materials of polymeric and inorganic nature, to achieve integrated products for manufacturing aircrafts, ships, submarines or other defence ground-based object. The products maybe in the form of flexible solid sheets, high viscosity liquid materials containing thermosetting or thermoplastic materials which ultimately results in solid film or sheets form, which can be suitably adhere to metallic or fiber reinforced composites surfaces under application of heat and/or pressure. More particularly the invention discloses a prepreg and sheet/film composition comprising of ferrites, fibers, binders, composite surfaces, adhesive composition and protective surface coating. [To be published with Figure 4]

No. of Pages : 17 No. of Claims : 11
An ecofriendly method of fixed oil extraction from oil seeds is disclosed. Research work provides a novel idea to the oil extraction plants that solids can also be employed for extraction of active constituents from powders of roots, leaves, seeds, fruits, bark of plants etc. In the present investigation, peanut and sesame oil have been extracted from powdered seeds of peanut and sesame respectively using solubilizing powers of two solids, thymol and menthol using different methods. Menthol and thymol can be recollected after extraction using appropriate methods and hence they can be recycled (from economic point of view).
Abstract:
Drawing instruments are very much necessary in school and other industries. Drawing of regular polygon, parallel lines and concentric circles need separate tools for it. This innovative tool provides solution of this task. This innovative tool comprises of compass, divider and innovative central assembly which makes this tool to draw all basic shapes of geometry. An innovative tool to draw regular polygons, parallel lines and concentric circles with calibrated scales is an easy, cost effective, user-friendly tool. Material of construction is mainly metal but more light weight material can be used for commercial purpose. This tool works on basic principle of geometry and mechanics. There is required relation for drawing polygons with this tool. The working of device is simple to understand. This innovative tool reduces the space required and cost required. An innovative tool to draw regular polygons, parallel lines and concentric circles with calibrated scales provide a solution in situations when any one of the compass or divisor is forgotten by the user. This problem could be avoided. With this innovation we can draw different shapes without any difficulty. This can increase the interest of the student in drawing subjects and progress in study. Further, we can maintain accuracy through this innovative tool to draw regular polygons, parallel lines and concentric circles.

No. of Pages : 24 No. of Claims : 10
(54) Title of the invention : INNOVATIVE CHEMICAL-FREE PORTABLE VERTICAL FARMING

(57) Abstract :
Vertical Farming has raised a new scope in agricultural sector as well as indoor farming. Said invention deals with the indoor and outdoor both farming options. For terrace or balcony plantation it can be easily introduce at the small scale. For the large scale farming at fields it provides the great options. Also in-house decoration purpose for ornamental/flowery plantation. Considering kitchen needs provides the option for leafy or creeper type vegetables. The overall demand of chemical free food/vegetables is day by day increasing on the vast level. It is directly related to the health & wealth. Said invention Innovative Chemical-free Portable Vertical Farming provides option of fully controlled plantation for kitchen vegetables. Considering decoration purpose at in-house, it provides perfect mindful solution. Said invention Innovative Chemical-free Portable Vertical Farming provides the water, labor, time, nutrients, fertilizers, pesticides, & plantation space saving option. Ultimately increases the crop yield & profit margins to the farmers.
The disclosed invention determining evoked emotion due to the musical stimulus of the normal subject as well as mental depression of the subject. The EEG signals are received from left and right frontal lobes of the subject listening to the music. The EEG signal is pre-processed and theta and gamma power extracted using the FFT algorithm. The evoked emotion and mental depression quantified by creating 1-D and 2-D models and model performances evaluated by statistical tests and supervised SVM. The 1-D model AEVIF780 giving the best performance. Whereas the 2-D model TGT giving the best performance. The clinical model significantly distinguishing a normal subject and mentally depressed subjects.
A medical device (100) for breaking up of thrombus or other obstructive material. The said medical device (100) includes a core wire (101) having a distal end (101b) which includes a tapered working portion (101a) being made up of a flexible material and is shape set to attain a sinusoidal shape. A coiled wire (103) is further mounted over the core wire (101) to provide kink resistance. The coiled wire (103) is a single wire coiled over the core wire (101), thus resulting in reduced stiffness of the device. A socket (105) is further attached to the distal end (101b) of the core wire (101). The said socket (105) provides firm attachment of the soft tip (107) to the core wire (101) without dislocation during the maceration.
(54) Title of the invention: ANN BASED SMART CALCULATION TECHNIQUE FOR VARIOUS PARAMETERS OF Bi2(S1-xSex)3 SOLAR CELL

(57) Abstract:
7. ABSTRACT The present study deals with ANN approach for prediction of various parameters of Bi2(S1-xSex)3 Solar cell. For training the neural network Thickness (nm), BandGap (eV), Crystallite size (nm), Dislocation density (lines m-2), Microstrain (lines m-2) were considered as input of the neural network and output parameters as short circuit current (Jsc), Open circuit voltage (Voc), Fill factor (FF) and efficiency of solar cell were considered. We change the values of hidden neurons to get optimized solar cell. Also we calculate the error for measure the performance of solar cell. To model the nonlinear properties of solar cell ANN is a beneficial tool.

No. of Pages : 13  No. of Claims : 6
Title of the invention : AN ELEGANT WAY OF CALCULATING CHARGE CAPACITY USING ANN FOR LITHIUM-ION BATTERIES

Abstract

The primary goal of present inventions is to calculate the different parameters on the basis of dataset available. This innovation is identified with ANN based technique for forecast and proficiency of button cell Lithium-ion battery. The Lithium-ion parameters, for example, Current (A), Voltage (V), Charge Energy (Wh) were considered during the invention. As per an exemplification of the present innovation, artificial neural system based forecast demonstrating technique incorporates (a) expectation of the productivity of button cell Lithium-ion battery (b) normal feed-forward ANN is used for the displaying reason (c) number of hidden neurons have been adjusted in the said demonstrating to assess effectiveness at any rate mean squared error (d) giving the determined anticipated information to experimentation in research centre space for approval. Execution of ANN model with '15' concealed neuron is near trial results.

No. of Pages : 13 No. of Claims : 5
**Title of the invention:** ARTIFICIAL NEURAL NETWORK BASED METHOD FOR PREDICTING THE EFFICIENCY OF DYE SYNTHESIZED SOLAR CELLS

**Abstract:**

The primary goal of the present innovation is to foresee everyday worldwide solar cell efficiency in view of meteorological factors, utilizing distinctive. This innovation is identified with ANN based technique for forecast and proficiency of Dye Synthesized solar cells. The solar cell parameters, for example, Voc, Jsc, FF was considered for this creation. As per an exemplification of the present innovation, artificial neural system based forecast demonstrating technique incorporates (a) expectation of the productivity of DSSC based solar cell having Highly crystalline morphology (b) normal feed-forward ANN is used for the displaying reason (c) number of hidden neurons have been adjusted in the said demonstrating to assess effectiveness at any rate mean squared blunder (d) giving the determined anticipated information to experimentation in research centre space for approval. Execution of ANN model with '20' concealed neuron is near trial results.

No. of Pages : 13  No. of Claims : 5
Title of the invention: ANN APPROACH TOWARDS PREDICTING EFFICIENCY OF MOS2 SUPERCAPACITOR

Abstract: Energy storage systems are fundamental to the activity of intensity frameworks. They guarantee coherence of vitality supply and improve the dependability of the framework. The first area is centred on various energy storage frameworks, considering capacity limit, voltage and current proportions, and energy accessibility. Among the energy storage devices, supercapacitor is widely used because it is a high-limit capacitor with capacitance esteem a large amount than different capacitors. In the supercapacitor we have used MoS2 material synthesized with various Electrolytes. In perspective on the above mentioned, we report an Artificial Neural Network (ANN) strategy to achieve the predictable results. Levenberg- Marquardt feed-forward calculation prepares the neural network. We measure the exhibition of the ANN model with respect to mean square error (MSE) and the relationship coefficient between anticipated yield and yield given by the system. Results confirm the stability of supercapacitor over the other energy storage devices. To show such kind of conduct, we give Synthesis technique, Electrolyte, Cycle Life as an info esteems and Specific limit as yield esteem. For the amalgamation technique info esteem we have taken both compound and physical strategies by normalizing it. The practiced ANN demonstrating confirmations a higher number of hidden neuron i.e. 30 design showing ideal execution as respects to expectation exactness.
**Title of the invention:** NEW MECHANISM FOR BUTTONLESS MOUSE.

| Abstract: | ABSTRACT Considering higher usage of mouse and constrained movement of hands, fingers, and wrist. It is leading to repetitive strain injury (RSI), which is often found in programmers and gamers. To eliminate this drawback we proposed new system of buttonless mouse. This new mouse is capable of addressing all the functionalities of existing mouse. Here we are replacing limit switches (used to manipulate right/left click) and IR-Photodiode (used for scrolling up/down) with the LDR (light dependent resistor). There is one LDR for each functionality of mouse. One directional LED is used to change the state of LDR. Mouse is divided into two parts i.e. Upper rotatable dome and lower stable base. Light emitter and light detector are located on base. Ball joint is connecting stable base and dome, while it is allowing to dome to rotate in all axis. Directional LED is placed between multi-cuboid structures, this LED sets LDR circuit ON. This information is sent to switch controller. This shows that particular functionality is initiated depend upon which LDR is invoked. This system reduces the clicking cycle and eliminates scrolling mechanism. |
| No. of Pages: | 12 |
| No. of Claims: | 7 |
A System and Method for blending of Hazardous Wastes for producing liquid blend for receiving heterogeneous streams of hazardous wastes with high calorific values and processing them for making a homogeneous liquid blend with highly dispersed particles is provided. The system consists of a suitably adapted high shear mixer vessel (100), a liquid and solid/sludge charging system (301, 302, 303, 304), a homogenizer (201), a filtration system (202, 203), suitably adapted safety systems and electrical systems. Such homogeneous liquid blends are suitable for being used as Alternate Fuels in cement-kilns. The output of present system can be fed to incinerators also.
Title of the invention: DRUM HANDLER

Abstract

The present novel Drum Handler provides the handling of both steel and fibre Drum (1). Present novel Drum Handler has Support Channel (11) which provides support to the Drum (1). To conform the Drum (1), U-Belt (15) is provided which is a broad polyester belt. And Drum (1) is tightly fixed in fork by using Rim clamp (16). Here Rim Clamp (16) is required for Drums (1) to secure a proper grip. The Drum Handler uses tilting mechanism to rotate the drum by 360 degrees. Present novel Drum Handler has Front Wheels (13) and Movable Wheel (12), wherein Front Wheels (13) are fixed ones, and used to transport the Drum Handler from one place to another. And Movable Wheel (12) provides easy rotation of the wheels in all directions. Hydraulic Pump (2) is used to lift the drum (1). Roller (9) are used to lift the Drum (1) in upward or downward motion. Gearbox (3) is used to increase the torque.

No. of Pages : 18 No. of Claims : 8
ABSTRACT UTENSIL CLEANING DEVICE

The utensil cleaning device (100) is in connection with a water pipe (5) and facilities cleaning of utensils by rotating cleaning scrub and eliminates use of hands or cost-intensive machines for scrubbing and washing utensils. The utensil cleaning device (100) includes at least one flexible pipe (10), an actuator assembly (20) and at least one cleaning scrub (40). The flexible pipe (10) and the actuator assembly (20) are connected to the water pipe (5). The flexible pipe (10) is manipulated to direct the flow of the water. The actuator assembly (20) rotates the cleaning scrub (40) that cleans the utensils when brought in contact with the cleaning scrub (40). The cleaning scrub (40) can take up soap to clean utensils and the cleaning scrub (40) is replaceable so that different types of cleaning brush (40) can be used interchangeably. The utensil cleaning device (100) is economical. (To be published with Figure 1)
Disclosed is a pain-relief formulation comprises of i) methanolic extract of Phyllanthus amarus in an amount of 1.92% by weight; ii) an oil having specific gravity of 0.860-1.046 in an amount of 10% by weight; iii) a surfactant in an amount of 35% by weight; iv) a co-surfactant in an amount of 35% by weight; v) water in quantity sufficient. Also provided a method of manufacturing the formulation.

No. of Pages : 34  No. of Claims : 11
The proposed invention is a pothole identification system that uses advanced technologies such as Machine Learning, Artificial Intelligence and Binary image classification. This system facilitates the use of these technologies through two input methods namely, drones and on road vehicles. Using these input methods, the system obtains various data regarding the roads such as images, GPS coordinates, sensor readings etc. The system makes use of a pre-trained Machine Learning model to identify the potholes in a matter of seconds with high accuracies. Potholes and road damage can be caused by several factors such as weather, heavy vehicles, overuse etc. thus potholes are inevitable. Potholes can also pose as a serious safety hazard especially to two-wheel vehicles. Furthermore, pothole repair has costed hundreds of millions of dollars worldwide. Not only is pothole repair expensive, but it also must be done in a timely manner. Instead of relying on manual citizen reports about local potholes, we can automate and accelerate the entire process using the proposed system. By implementing the proposed system, we are able to provide a cost effective method to identify and manage potholes, ensure the quality and safety of roads, and allow proper maintenance of roads. In addition to this, the proposed system makes use of modern and advanced technologies to solve the problem in an innovative, effective and efficient manner.

No. of Pages : 15 No. of Claims : 4
Title of the invention: A HYBRID METHOD FOR DEEP ENN WITH MULTISCALE ROTATION INVARIANCE FEATURES FOR HYPERSPECTRAL IMAGE CLASSIFICATION AND RETRIEVAL.

Abstract: Nowadays, hyperspectral image processing is most popular field in computer science as large amount of data is generated which is helpful in understanding a lot of relevant information for various applications. Generally, all research is focused on preprocessing, feature extraction and classification of hyperspectral images. For filtration of the HSI/SAR (Hyperspectral/Synthetic aperture radar) image there are multiple methods like Gabor filter, ICA filter etc. are available. Recently CNN (Convolutional Neural Network) is mainly used for classification as it gives high performance because of its hierarchical learning structure. In proposed system we are using MS-MA BT-MS-CLBP, DeepIRDI(Image Registration Using Deep Convolutional Features and Dynamic Inlier Selection) algorithm with Deep Neural Network for feature extraction and classification. Multiscale, Multi angle and Multilabel approach is proposed. All the mentioned algorithms will extract features which will be combined to get a new hybrid feature set which further gets classified using Neural Network. By this method we will get better result than existing independent methods. To execute this complex task we are implementing this system on NVIDIA GPU using Compute Unified Device Architecture (CUDA) programming in MATLAB 20.18 version. It gives unclassified data after classification. Due to relevance feedback we are getting maximum accuracy. Experimental results analysis based on various datasets will be carried out to prove that this technique can acquire greater classification accuracy than other traditional techniques. Keywords: MS-MA BT(multi-scale multi-angle breaking ties), MS-CLBP(Multiscale Classification Local Binary Pattern), DeepIRDI,(Image Registration Using Deep Convolutional Features and Dynamic Inlier Selection), Synthetic aperture radar (SAR), Convolution neural networks (CNNs), Hyperspectral image (HSI), classification.
Title of the invention: WIRELESS USB DATA TRANSFER CONTROLLER

Abstract: This invention would make data transfer easier and reduce the time losses caused by present technology. It will reduce the time latency which is present in current systems. It will be helpful for those who are constantly in need of provision for data transfer or files. It will reduce the dependency of third person for transferring files remotely.

No. of Pages: 9  No. of Claims: 3
Title of the invention: NOVEL DESIGN OF PNEUMATIC PICK AND PLACE ROBOTIC ARM FOR MANUFACTURING APPLICATION

Abstract:
Utilization of automation is demonstrated in this invention which conveys the parts of the ferromagnetic materials. In conjunction usage of conveyor belts is conventional along with the robotic arms which runs on the pneumatic power for achieving the functionality of picking and placing the object. Pneumatic cylinders are used in the system for its development with valves in the tubing and electromagnet. The system also consists of frame for supporting purpose, shafts and rods. Controlling of the arm is done pneumatically for the motion of to and fro. Materials such as metals are detected by the sensors whose signals are sent to the microcontroller. The circuit is simple used for switching which helps the mechanism of pick and place of the piece of metal to be carried out efficiently and a faster manner. These pneumatic arms are used widely in the industries of automation which consist of conveyor belts along with it for meeting the needs of the automation.

No. of Pages: 13 No. of Claims: 6
A SMART ALGORITHM FOR SOURCE ALLOCATION AND SELF MANAGEMENT OF WIRELESS IOT GATEWAY

Momentum is gained rapidly by Internet of Things in the field of telecommunications. Data exchange and interactivity is allowed by the conventional networks however such networks are not designed for the functions and features of devices of IoT. The Proposed invention share common things among recourse for various types of smart appliances. The technique is based on the architecture of centralized management of IoT network controlled by AI (Artificial Intelligence). The controller utilizes the algorithm that is based on technique of machine learning which collects the information by a protocol on the network. Protocol message announces each of the smart things connected to the network as function and protocol of service discovery over the telemetry transport protocol by the queued message. Allocating resource and discovering resource in the network is done by the proposed invention by integrating IoT devices.
Title of the invention: ANTI BACTERIAL TREATMENT TO CURE LEUKORRHEA USING MEDICINAL PLANT.

Abstract:
The invention discloses an Anti bacterial treatment to cure leukorrhea using medicinal plant. This medicine for preventing and curing leucorrhoea, which is prepared by the medicinal materials and procedure, leucorrhoea, is a disease prone, and it is difficult to treat disease found in women; the current invention is the art would wish to complete prevention of the disease. The present innovations improves the net impacts of medicinal legacy, one of a kind bits of knowledge, inquire about on conventional drug treatment of gynaecological ailments. The utilization of unadulterated grown medication. It is another development in the pharmaceutical workmanship in gynaecological infection. To investigate the country drug legacy, advance research division of medication and wellbeing administrations to help humankind. The battle for most of ladies experiencing gynaecological malady rapid recuperation. To solve this problem, the present invention provides complete treatment to leucorrhoea with the help of medicinal methodology.

No. of Pages: 7 No. of Claims: 3
(57) Abstract:
The present invention relates to the gem embedded detachably attached fingertip ornament and process thereof. The gem embedded detachably attached fingertip ornament comprised of plurality of metallic plate, plurality of glue type, and plurality of diamond of different size and shape. The metallic plate are pseudo nail of different shape and size according to the size and shape of nail and designed and pattern selected by the user. The plurality of metallic plate are of different size and made up of gold, platinum, silver, bronze, iron, aluminum, copper, titanium, acrylic, plastic and glass. The plurality of glue type are of aloe-vera Glue, corn starch glue, natural glue, eyelash glue, and glue made from vinyl acetate monomer. The plurality of diamond in the present invention which are of multiple size which further comprise of round, star, pear, marquise, emerald, princess, baguette, heart, illusion, jade, HPHT (high-pressure high-temperature), cubic zirconia, lab grown, treated, fancy shape, moissanite, rose cut, oval, triangle, rectangle, hexagonal and octagonal.

No. of Pages : 31 No. of Claims : 7
The invention relates to an agricultural composition for soil application comprising elemental sulphur, at least one amino acid, their polymers, salts or derivatives or mixtures thereof and at least one agrochemical excipient. The composition comprises particles in the size range of 0.1-20 microns. The invention relates to water dispersible granular composition for soil application comprising 0.1%-70% of at least one amino acid, their polymers, salts or derivatives or mixtures thereof and 20%-99% of elemental sulphur with 0.1-60% of at least one surfactant. The invention further relates to liquid suspension composition for soil application comprising 0.1%-70% of at least one amino acid, their polymers, salts or derivatives or mixtures thereof and 1%-65% elemental sulphur, 0.01-5% of at least one structuring agent. The agricultural composition further includes at least one micronutrient, their salts, derivatives, or mixtures thereof or plant growth promoters. The invention further relates to a process of preparing the composition.

No. of Pages : 84 No. of Claims : 24
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<td>(57) Abstract</td>
<td>The invention discloses a compliant aerofoil device configured to change its profile in flight using shape memory alloy (SMA) and piezoelectric composite elements in response to control inputs. The device is formed of a rigid leading edge part (110) including a D-spar and a compliant trailing edge part (120), connected by an elastically deformable membrane (130). Trailing edge part (120) includes a flexible shell (122) and a rigid tail tip portion (124). The invention discloses a method of controlling an aerodynamic or hydrodynamic structure by providing at least one tensile element along with one or more bending elements. The structure may be used in the wings of any aerial vehicle such as UAVs, and helicopters, or any aerodynamic or hydrodynamic structure such as a wind turbine, hydrofoil etc. for controlling lift. The device minimizes drag and provides high aerodynamic efficiency. (FIG. 1A)</td>
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<tr>
<td>No. of Pages</td>
<td>30</td>
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Title of the invention: SYSTEM FOR MANUFACTURING TEXTILE PRODUCTS FROM ROVING WASTE MATERIAL AND METHOD THEREOF

Abstract:
The present invention relates to textile products and the manufacture of yarns. More particularly, the present invention relates to a system for manufacturing textile products from roving waste material. Further, the present invention relates to the method of manufacturing 100% regenerated ring spun yarn, out of waste generated during spinning and additionally, the present invention relates to the method of manufacturing regenerated ring spun yarn with cotton waste, comber noil and carding flat waste which produces 100% cotton ring spun yarn. Advantageously the present invention relates to a cost effective method for recycling roving waste generated during cotton spinning, and produces yarns of the highest possible quality when compared with the virgin fibers. Figure 1.
The system comprises of a monitor to display the stimulus patterns (110), a pattern generation system (109), a synchronization system (115) to synchronize or to time lock the onset of stimulus patterns with the recording of visual evoked potential, a data acquisition system (120) comprising of an indigenously developed EEG amplifier with appropriate gain, common mode rejection ratio, input impedance and passband and a commercially available analog to digital converter to digitize the data and a processing system (117) with appropriate indigenous programs to process the signal in order to extract the VHP signal and an algorithm to find the visual acuity. The said synchronization system provides synchronization of VEP stimulus generating system and data acquisition system to record the response from the occipital region of the subject by providing a series visual patterns.
Title of the invention: A NOVEL ABSORBENT PAD TO CONTROL AND MAINTAIN MOISTURE IN DENTIN COLLAGEN FOR GOOD BONDING

51) International: A23K0020147000, C12P0019040000, B82Y0030000000, C22B0003000000, C08L0097020000

Classification

(31) Priority Document: NA

(32) Priority Date: NA

(33) Name of priority country: NA

(86) International Application: NA

(87) International Publication: NA

(61) Patent of Addition to Application: NA

(62) Divisional to Application: NA

(57) Abstract: not submitted

No. of Pages: 12  No. of Claims: 9
Abstract: Method and system for compressing signals received at base station. Embodyments herein provide a method for compressing signals received at a base station (100). The method includes receiving, by a communicator (126) of the base station (100), a plurality of signals using an array of antennas in the base station (100) over a time span and compressing, by a radio unit (120) of the BS (100), the plurality of signals by selecting basis signals and representing the plurality of signals in terms of the basis signals, where the basis signals are a set of signals of the plurality of signals which are received at a set of antennas of the array of antenna. Further, the method includes transmitting, by the RU (120) of the BS (100), the basis signal and the plurality of signals represented in terms of the basis signals for each of the received signals of the plurality of signals to a distributed unit (140). FIG. 3

No. of Pages : 57 No. of Claims : 39
ABSTRACT

A system and method for assisting a special child in knowledge enhancement is disclosed. The system 100 includes a database 102, a diagnostic module 104 and a learning module 106. Based on the performance of the child in the pre-stored diagnostic test, the pre-stored lessons are provided to the child. The system 100 includes a microphone 110, a touch panel 112 and an image capturing unit 114 as input means, and a speaker 116 and a display unit 118 as output means. The system further includes an adaptive learning unit 108. Based on the performance of the child in the pre-stored lessons, the lessons are revised to meet the performance of the child. The system 100 of the present invention is cost-effective and helps parents and educators to identify weak learning skills of the child and accordingly work on the same. FIGURE 1

No. of Pages : 36 No. of Claims : 10
The invention discloses a rechargeable iron ion battery and a method of charging and discharging the battery. The battery comprises an anode including iron, an iron compound or an alloy thereof, a cathode including a layered metal oxide coated on a current collector, an electrode separator membrane and an iron ion conducting electrolyte in contact with the anode and the cathode. The cathode is coated with slurry containing at least one additive and a binding agent. During charging, de-intercalation of Fe²⁺ ions from the cathode occurs and the electrolytes causes transport of Fe²⁺ ions from the cathode to the anode via the electrolyte. During discharging, electroplating of Fe²⁺ ions occurs at the anode and the ions from the anode migrate towards the cathode. The cathode accommodates the Fe²⁺ ions within the layered metal oxide structure. The battery has a cyclic stability with 40 - 50% capacity retention.

No. of Pages : 29 No. of Claims : 17
An unmanned aerial vehicle, commonly known as a drone, is an aircraft without a human pilot aboard. Essentially, a drone is a flying robot that can be remotely controlled or fly autonomously through software-controlled flight plans in their embedded systems. Flying robots are increasingly adopted in search and rescue missions because of their capability to quickly collect and stream information from remote and dangerous areas. Their maneuverability and hovering capabilities allow them to navigate through complex structures, inspect damaged buildings, and even explore underground tunnels and caves. Since their size is fixed, maneuvering over the compact areas and tunnels of variable size becomes an issue. The invention discloses a model of quadrotor design which has the capability to change its size. The arm length of the quadrotor can be changed dynamically so that it can fly in areas of variable sizes that would be hard to reach with the quadrotor of fixed arm length. On the other hand, the present invention is cost effective, and lightweight since arms of the drone are designed with Polyvinyl Chloride. Using this model, drones will be able to move over compact areas and passages of variable sizes, thus aiding in better exploration during search and rescue operations.
Abstract:
Multipurpose device (100) to measure height of persons, overhead tank volume and sewage tank emptying status using ultrasonic sensor is disclosed. Casing (10) is designed with fusion 360 and 3D printed with compartments for controller, sensor, communication module and battery. Additionally slot is provided for the sensor transmitter and receiver. Gadget (30) consist of the ultrasonic sensor for measuring the height and transferring the signal to mobile/net through Bluetooth or WIFI connection (70). Android app developed has three functionalities to detect the height of the persons (53), overhead tank volume (55) and septic tank waste discharge status (57). Depending on the selected functionality, the results will be displayed. In addition, SMS will be sent to alert in case or crossing the threshold for tank volume thereby allowing booking of the water lorry on time. Powering the device is by battery or micro USB.

No. of Pages : 22 No. of Claims : 9
A biomedical device (100) to assist paralytic and disabled persons to reach out to their caretaker by simple feather touch avoiding strain to the users is disclosed. The device (20) consists of wireless transmission of the need of the patients to the caretaker just by pressing keys. When caretaker is at home, Bluetooth is sufficient for communication as it works by just pairing Bluetooth module in the controller with Bluetooth in mobile. In case, if net connection is available, the information can be transferred through WIFI. An app (30) is also developed to access the information either via Bluetooth or WIFI and depending on the key pressed, need of the patient is either displayed as a text or image. Additionally, a voice message is also used to alert the caretaker. A special key is used to send SMS to kith/kin/ambulance in case of emergency by the elderly person. Casing (10) for the gadget is designed using Fusion 360 and 3D printed. Power (40) to the gadget is given using micro USB connector or battery.
The present invention discloses a method for ranking. The method includes the steps of receiving, at least one model from a central server to form at least one model node; training, the at least one model node with at least one data node to generate a trained model; generating, a weight from each of the at least one data node for the trained model; transferring, the weight from the at least one data node to the central server; inferencing, an inference output using the trained model and the data node; determining, an edge between the at least one data node and the model node, wherein the edge is determined depending on the influence of the data node or the model node on each other in generating the trained model and the inference output; determining a score for the data node and the model node based on the edge formed.

No. of Pages : 25 No. of Claims : 9
Abstract:
Calcium silicate ceramics, in particular wollastonite (CaSiO₃), is the most commonly used bioactive material for bone regeneration and repairing applications. The present study aims to synthesise cost effective wollastonite using natural waste materials such as rice husk ash (RHA) and eggshells, sources of silica and calcium oxide respectively. Wollastonite was prepared by sol-gel method and based on thermogravimetric and differential thermal analysis (TG/DTA) results the samples were sintered at 850°C. X-ray diffractometer (XRD) revealed that the sintered samples possess single phase p-wollastonite. The assessment of bioactivity was examined using in vitro studies by immersing the pellets in simulated body fluid (SBF) for different time periods (3, 7, 14, 21 days). The growth of hydroxyapatite layer on the surface of the sample was analysed using XRD, Fourier transform infrared (FTIR) spectroscopy and Scanning electron microscopy-energy dispersive spectrometer (SEM-EDS). The significant change in pH of the SBF solution was observed during the first 11 days of immersion, after which the pH was saturated. Biodegradation test was performed in SBF and Tris buffer solutions according to ISO 10993-14 standard, and the test revealed that the ceramic pellets showed lower degradation rates with slow dissolution of ionic species. MTT assay demonstrated that the prepared wollastonite exhibits cytocompatibility with MG-63 cells at different dosage (1000-50 μg/mL) for 48 hours. The results suggested that p-wollastonite can be a low cost bioactive material, which can be useful in biomedical applications.
The present invention discloses a railway track monitoring system for detecting any crack, breakage, or obstacles present in the railway track while travelling. This system of the present invention comprises the IoT device equipped with sensors, camera with moving stick, and flexible rod. Flexible rod in train removes or kicks out the small obstacles in track, or it is adjusted automatically to remove the large obstacles when it is present in railway track. The moving stick which is attached with camera is to capture the clear video, especially in turning. The process of anomaly detection is done through IoT device, which is equipped with sensors to detect any anomaly event present in the railway track, the anomaly may be considered as any animal or a person. Finally, the railroad engineer will receive the detected information regarding any anomaly events to stop or drives the train for securing every passenger from accidents.
Title: Mobile Phone Pattern Unlocking System

The present disclosure discloses a system and method for cracking the pattern lock of the mobile phones using a pattern cracking algorithm. The cracking algorithm cracks the patterns without any data loss for forensic examinations. Such a pattern cracking algorithm helps in unlocking simple and hardest pattern locks accurately with ease.

No. of Pages : 15 No. of Claims : 5
The present invention is related to the field of pharmaceutical technology and describes the preparation of a novel modified starch i.e., starch valerate and its concentration optimization in fast dissolving systems in order to obtain an immediate release of active pharmaceutical ingredients (APIs) and improved dissolution rate. The novel superdisintegrant which is a modified starch i.e., starch valerate is compatible in the formulation of fast dissolving systems for about large number of APIs with enhanced dissolution rate and dissolution efficiency within 5 minutes. In this invention, formulation of fast dissolving tablets employing starch valerate forms a platform technology for immediate release of APIs that belong to different chemical and pharmacological categories which need immediate release for faster therapeutic action. Also, the fast dissolving systems employing the novel superdisintegrant, starch valerate is suitable for immediate release of several APIs. Therefore, the development of the novel superdisintegrants like starch valerate are necessary, as they are biodegradable, economical and safe to use.
Title of the invention : A PRECISE JAW RELATION RECORDER

Abstract:
The present invention relates to the device for orientation of occlusal plane to Ala tragus line, measuring vertical dimension and registering centric jaw relation simultaneously in a single step. It consists of vertical (1) and horizontal arm (2) calibrated with readings, nasal and chin pointers (5,6), adjustable bite fork (4) and transfer assembly to the articulator (9). The device can be used advantageously for recording jaw relation in edentulous as well as dentulous subjects and also for transfer of recorded jaw relation to the articulator. Refer Fig 8.

No. of Pages : 35 No. of Claims : 5
The present disclosure discloses a system and method for lesion volume estimation of human brain from 2D MR images. The system comprises of an image input means 101, a pre-processing means 102, a skull removing means 103, an image segmenting means 104, and a volume estimation means 105. The system for estimating lesion volume in human brain from 2D magnetic resonance images utilizes machine learning through weakly trained mechanisms and gauss divergence theorem. The proposed system provides an algorithm for estimating lesion volume in human brain from 2D magnetic resonance images using adaptive weighted bilateral filter and contourlet transforms. The system for lesion volume estimation of human brain provides a cost-effective method to estimate lesion volume in the human brain from 2D magnetic resonance images accurately thereby reducing the effect of ionization on the patient. The present disclosure aids to reduce the computational latency in estimating lesion volume from 2D magnetic resonance images.
Title of the invention: IOT-BASED FLOOD MONITORING AND ALERTING SYSTEM USING RASPBERRY PI

Abstract:
ABSTRACT Title:- IoT-based Flood Monitoring and Alerting System using Raspberry Pi
The loss of properties and living population is getting enhanced by every year due to the dynamic alterations in weather conditions which results in heavy floods. Therefore, implementation of an intelligent analysis of flood risk is necessitated for the field of research in Disaster management. This article implements an intelligent IoT-based flood monitoring and alerting system using Raspberry Pi model, where water sensors and rain sensors are utilized to alert the authorities regarding the heaviness of rain and monitoring of water level in a lake or river. This system alerts the people in nearby villages since it utilizes IoT system for notifying the village people.

No. of Pages: 7 No. of Claims: 6
The present invention is related to a method of Drilling Nano SiC reinforced Aluminium Matrix composites. The machining community considered Drilling as one of the most critical machining operations. It has gained a unique position in the machining operations. These Nano SiC reinforced Aluminium composites are hard to machine materials, whose strength to weight ratio is very high. By employing conventional machining practices for working of these kinds of materials is tough and is rapidly consuming the resources. Therefore, sustainability in the drilling of these materials is not maintained. The present invention gives detail about the Sustainable Cryogenic Liquid Nitrogen (LN2) machining of composites. In the cryogenic LN2 machining, the temperature in the cutting zone reduced to a lower range. Therefore, the hot-strength and hot-hardness of the tool remain high, and the temperature-dependent tool wear reduces significantly. The present invention also allows for increased cutting speeds and feeds when used with such advanced composite materials, thus increasing productivity and providing increased performance and consuming lower resources and producing lesser dissipate into the environment.

No. of Pages : 13  No. of Claims : 6
Abstract:
A vending machine is an automated machine that provides items such as snacks, juices, tea or coffee to customers through credit card or by online payment. The machine works 24 hours without any break producing necessary food items used by mankind. People give the title food house to this machine after realising its function. In four ways, this machine works. To begin with it collects the payments for the food items. At the second stage, food items such as snacks etc are distributed according to the demand. The machine also supplies juice to the customers on demand. During its last function, it provides tea or coffee as per our priority. This is a modern machine with facilities such as camera setting by using it, the customers can easily contact with the dealer if there is any inconvenience. The notable speciality of this machine is that the food items are stored in different cylinder pack and food tray. The price of the items will vary according to the food items ordered. The customer can easily read the details of the food item kept inside the machine. The most modern technique is introduce in the machine and by using the barcode for available in the bill, the customer can get the proper quantity of food items with superior quality. In addition to this, there is provision for self serving for common people. The dealer give emphasis to new food items there for old items after its duration will be removed from the machine.

WORKING
The above figure shows the basic block diagram of coffee vending machine. The above system consist of ARDUINO UNO Controller for controlling process. The controller is interfaced with LCD display, RFID reader, EPROM, motor. The RFID reader stores the employee data (e.g name, unique ID), when reader scans the RFID tag given to employee it compares with saved data and allows access to the machine meanwhile the IR signal from IR sensor is required for detection of cup at machine. The AC motors are used for the flow control of coffee powder. LCD display is used to show details of employee and process operation.

APPLICATION AND FUTURE SCOPE
Though there is a great scope to make automated appliances based on Arduino, but eye catching technological innovation has not been made yet. So we can implement the idea to make such appliances which will be based on Arduino & RFID in our daily life. This project can be used in restaurant, hotel, coffee shop where customers drink coffee in a daily basis. It can also be used in industry houses where employers drink coffee. The Idea came in our mind after getting trouble with a plenty varieties of cards, fees book & payment methods in our institution. We thought to centralise the payment as well as identity system. F N T Of finl RpfD UI-bdSrft wULMje giveifitoleacfi df thesuderit at thetimejof admission. Linking Accounts, Libraries, Canteen, Hostel, Mess etc. with a common Database. Introducing Self Service Vending Machines (Coffee, Tea, Cola, and Snacks) to give 247 food facilities to the students. RFID based attendance System can be made. RFID based Door Lock System can be made. Make a proposal to the Govt, of India to implement RFID in AADHAAR UID instead of barcode or QR code.
Title of the Invention: SMART BUSTER

A system for predicting the energy based on the detecting of the AC power consumption factor of the plurality of electrical appliances and effecting the corrective measures in the said appliances comprises plurality of sensors for sensing and detecting the alternating current and alternating voltage consumed by the multiple electrical appliances installed in the vicinity; at least one processing device for receiving the signals from the plurality of sensors, analyse the said signals, compute the power consumption factor of the each and every electrical appliance comprising the said system, intimate and initiate the rectification process upon the said signals exceeding a pre-determined threshold value, predict the power consumption of the electrical appliances based on the received data and store the said processed data in the cloud storage and display the said data in the wireless communication device; a server for storing the real time data from the sensors and processed data from the processor based on the said signals from the sensors and a wireless communication device in communication with the said server for intimating the processed data to the end users. FIG.1

No. of Pages: 25 No. of Claims: 7
Title of the invention: LIQUID SEALER IN LINER CONTACT AREA FOR RAILWAY TRACKS

Abstract:
Indian railways have laid tracks on PSC sleepers. On PSC sleepers rails are to the sleeper with liners and elastic toe load clips. The liners are made up of metal, GFN or Hard materials. When the rails and sleepers assemble is exposed to corrosion agents such as rain, night soil dropped from the railway coach toilets, urine dropped from the railway coach toilets, saline environment, industrial pollution, Dew developed due to humidity in the environment. The corrosion agents or dew developed in lower temperatures after falling on the rail they will slowly penetrate into the minute gap between rail and liner. As both the liner and rail are rigid materials the contact surface between the both is not fluid tight so the corrosion agents penetrate into the contact area between liner and rail and remain. The persistent presence of the corrosion agents in the humid environment between liner and rail will cause serious corrosion in the liner contact area and leading to renewal of rails pre maturely. This innovation is aimed at completely seating the liner contact area prevent formation of thin moisture layer with an additional material such as rubber, PVC, nylon, metal etc. The sealing liner contact area from the corrosion agents into the liner contact area and thereby prevent corrosion of rails and pre-mature renewal of rails.
AN IMPROVED PROCESS FOR THE PREPARATION OF ETODOLAC KEY INTERMEDIATE

Abstract
AN IMPROVED PROCESS FOR THE PREPARATION OF ETODOLAC KEY INTERMEDIATE

The present invention relates to an improved process for the preparation of 7-Ethyltryptophol using compound of formula II.
Title of the invention: NOISE FREE PUBLIC ADDRESS SYSTEM FOR AUDITORIUM USING WHITE LIGHT EMITTING DIODE COMMUNICATION

Abstract:
A visible light communication based public address system for auditorium to deliver the orators speech to audience - contains white light emitting diodes based transmitter section and PIN photodetector array based receiver.

No. of Pages: 14 No. of Claims: 10
A hygiene device comprising many components; waist band (101) is provided for securing grip around the waist of the wearer; pair of leg holes (107) are provided in the lower portion to insert the legs of the wearer with elastic bands to ensure no leakage flows out and attached circumferentially; the lower portion comprising a front panel (102), back panel (103) and centre crotch panel (104) where one side of the centre panel is connected to the said front panel (102) and the other side is connected to back panel (103) horizontally; the said centre crotch panel (104) comprising an inner layer preferably a knitted fabric mesh or net fabric to allow the fluids to infiltrate, an outer layer is a laminated leak proof layer provided with a longitudinal slit to secure a fastening means (106) where the said inner layer and outer layer are attached longitudinally to form an intermediate space between both said inner layer and outer layer to accommodate an absorbent material to absorb the body fluids infiltrated through inner knitted layer (105). This absorbent can be changed at will as and when needed by the wearer.
(54) Title of the invention : SPEECH BASED SCRIBER FOR VISUALLY IMPAIRED STUDENTS

(51) International :G10L0015260000,G10L0015220000,G06F0016350000,G06F0003160000,G10L0015280000

classification

(31) Priority

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Application :NA

Number :NA

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Date :NA

(62) Divisional to

Application :NA

Number :NA

Filing

Date :NA

(57) Abstract :

Disclosed is a system (100) and method (200) for scribing texts corresponding to received speeches. The system (100) comprises a processing unit (110), a scribing unit (112), a speech signal receiving unit (104) to receive the speech signal from a source (102), wherein the speech signal receiving unit (104) comprises a speech-to-text (STT) converter (106) to convert the speech signal to a text, and a text transmission unit (108), coupled to the speech signal receiving unit (104), to transmit the text to the processing unit (110), wherein the processing unit (110) is configured to provide input signals to the scribing unit (112).

No. of Pages : 28 No. of Claims : 10
**Title of the invention:** SMART CITY SURVEILLANCE

**Abstract:**
In recent years crime preventions and criminal identification are the primary issues of all the societies. In the present aspects, thumb impression is a very easy way of identification of criminals. The major issues of the criminals are getting cleverer by escaping themselves from the thumb impression in the crime scene. In this invention, an automated facial recognition system for criminal identification has been proposed using open computer vision by applying machine learning algorithms. Face recognition is a popular area of research in computer vision for successful applications of image analysis. By using computer algorithm in face recognition, the unique details of the person’s face have been captured such as distance between the eyes or shape of the chin. This system will convert them for calculating by mathematical formation based on the comparison with other data for identifying the faces from the stored database. The final result will be shown for producing the quality of services for identifying the criminals from the theft information.
Title of the invention: **SURROGATED FLOW PASSAGE BY NON-WINGLET ARRANGEMENT**

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Abstract:
An aerodynamic system providing an aircraft wing having chord length, span, leading edge and trailing edge. The aircraft wing is further including the surrogated coordinated flow passage with holes in top and bottom of the root section of the aircraft wing and holes in top and bottom of the tip section of the aircraft wing and the upper and lower surrogated passage are interconnected. The micropumps are placed in the leading edge of the root section of the wing, trailing edge of the tip section, mid-way of the span of the upper most region of the wing and the mid-way of the span of the lower most region of the wing. Employing a pressurized fluid source, which may include upstream external air flow enters into the upper root side by suction created by the micropump placed in leading edge of the root and delivers through the surrogated passage and it is again partially transmitted at the lower tip side by suction to lower surrogated passage and recovery slot The tangential blowing occurred from upper root side to lower tip side through surrogated passage. In the same way the tangential blowing occurred from upper tip side to lower root side through surrogated passage. On the whole, the circulation of the flow inside the surrogated flow passage could limit the tangential velocity that creates vortex in the wing tips and guided for reducing the induced drag through this circulation control in the surrogated passage.

No. of Pages : 25 No. of Claims : 19
(54) Title of the invention : ARTIFICIAL INTELLIGENCE ENABLED AUTOMATED SYSTEM FOR TARGETED CONTENT ON DISPLAY DEVICES

(57) Abstract : ABSTRACT ARTIFICIAL INTELLIGENCE ENABLED AUTOMATED SYSTEM FOR TARGETED CONTENT ON DISPLAY DEVICES The present invention discloses an artificial intelligence powered automated system (8) which broadcasts content based on relevance to a real time targeted audience using scene-understanding, image-descriptive techniques, object detection, and classification techniques. It includes an image grabbing framework (1) which captures live feed and pushes captured data into a control box (3). The control box (3) processes the data received from servers (4) and image grabbing framework (1), selects the most relevant content and sends to display device (2). The blockchain module (5) records information of the displayed content. The visual representation module (6) is used to provide a visually understandable form of data stored in blockchain module (5). The client dashboard (7) displays data as created by visual representation module (6) using data obtained from the blockchain module (5). Ref: Figure 1(a)

No. of Pages : 29 No. of Claims : 10
Title of the invention: CONCAST ROOFED STRUCTURE FOR TRANSITORY PROTECTION

Abstract:
A Precast construction method that is used for structures like bus shelters where people take temporary shelter. The walls and the roof is made of reinforced concrete with predesigning to make the sections as thin as possible and being stable its form. The walls and slab are transferred to the site and assembled in position at very short period of time. The side walls has openings and may be oriented such that there is flow of air inside the shelter. The joints of the wall with the floor and the roofs with the walls allows the structure to be stable and mechanism is designed to transfer the loads and no moments. The strength of the structures meet the desired standards and is laterally stable.

No. of Pages: 5 No. of Claims: 1
System and methods are provided for encoding and decoding information (for example, secret key) using a physiological value. Providing a wireless Stand-alone Chip (SoC) application operating environment and semi-automated systems for creating application software for the security. The patients ECG signal is measured by the transmitter device from the cardio of the patient. Eight parameters are generated from the patients ECG signal and Least Significant Bits are extracted to form random bits. These values are given for the generation of a secret key. Electronic Secret key (ESK) information is kept as coefficient and a polynomial equation is created. The majority feature of the vital signal are identified from a physiological value and extracted in an ordered pairs. A majority of ordered pair is combined with the polynomial equation. An information bunch is formed including the ordered key and the unintelligible populated numbers of chaff points are combined. From the PV only the uniquely identified points are extracted, achieving a least computation. Only these least unique points are kept as reference in the chaff point generation. In this chaff point generation, only a less number of candidate chaff points are created and from there the chaff points are generated. Making the process more suitable for the resource constrained device. This sensitive information bunch is created and transmitted through a Raspberry Pi pro 3 device. The receiver device is configured with a corresponding Physiological Value to filter out the chaff points. Then polynomial reconstruction is done and the coefficients are extracted, then used as the ESK by both the devices.
Abstract:
An aspect of the present disclosure relates to a mobile device comprising a sensitive information protection mobile application operable at boot up in the electronic device. The electronic device includes one or more processors, a memory, a user interface and a memory. The memory includes executable instructions which upon execution by the first processor trigger the sensitive information protection mobile application coupled to a second processor. The memory encrypts the indicated sensitive information using a frequency based substitution method (FBSM) to generate one or more images. The memory stores at a database the one or more generated images securely to be retrieved by the second processor.
Water Pollution is caused due to contaminants, either knowingly or unknowingly into the natural water bodies and impacts our ecosystem and needs to be addressed. This invention develops a method of real time water quality monitoring and distribution management system with low-cost design. The Internet of Things (IoT) based technology provides solutions in finding the quality water, and the distribution management. Thresholds of various parameters were considered in terms of hydrogen ions (pH), turbidity, temperature, water flow, dissolved oxygen and water conductivity and gaseous substances in water are checked collectively and any unacceptable levels are notified. All the values are observed with various sensors and processed through IoT platform controller. A smart meter for water consumption and billing, water leakage, efficient water distribution and proper motor control are managed with sensors. Monitoring and remotely accessing the water quality parameter supported by Wi-Fi enabled systems along with secure mobile application development.

No. of Pages : 16 No. of Claims : 5
Title of the invention: A METHOD AND AN IOT SYSTEM FOR OPERATING ILLUMINATION CONTROL AND FAULT DETECTION OF THE STREET LIGHT

Abstract:
India lives in villages. Villages are now urbanised by smart city mission of Indian government. Mission proposes to provide core infrastructure and responsive governance to its citizen by connecting internet to physical devices like streetlight, municipal infrastructure, parking meters, etc. Street Light System is a simple powerful concept of urbanisation. This invention proposes a new innovative street light system with optimized street light management and efficiency. It uses many sensors to control and guarantee a better efficient system. Presence of a person or an obstacle is detected by using the presence detector sensors. Street lights will be switched ON only when a person or an obstacle comes in the detection range else it will be switched OFF or the intensity of lights can be controlled. Wireless communication uses GSM devices which allow more efficient street lamp management system and control. The system allows substantial energy savings with increased performance and maintainability. By using this system, the manual works will be reduced to a great extent.

No. of Pages: 25
No. of Claims: 10
Title of the invention: PREFABRICATED MESH AS LONGITUDINAL CORE REINFORCEMENT IN REINFORCED CONCRETE MEMBERS

Abstract:
This invention provides a novel means of resisting shear in Reinforced concrete (RC) members by using a prefabricated mesh as longitudinal core reinforcement apart from conventional stirrups/ties, which not only reinforces the core zone of Reinforced concrete cross section but also provide resistance against diagonal tension due to shear in a continuous manner, thereby improves the performance of RC members. The use of prefabricated mesh as longitudinal core reinforcement will not involve any tedious bar bending work similar to that in making stirrups/ties but also offers superior performance from the point of avoiding the sudden failure in resisting shear force in Reinforced concrete members, induced due to externally applied loads.

No. of Pages: 5
No. of Claims: 7
Title of the invention: SECURELY STORING DATA USING DOUBLE LAYERED ENCRYPTION METHOD

The present invention provides a highly secured method for storing data in cloud. The present invention further provides a method for storing data in cloud using double layered encryption method. The method according to the present invention is depicted in Figure 1.

No. of Pages: 10
No. of Claims: 5
Title of the invention: A METHOD TO SECURELY TRANSACT DATA IN BLOCKCHAIN TRANSACTIONS

Abstract:
The present invention provides a method to securely transact data in blockchain comprising GK-MP scheme with ECC re-encryption. The present invention provides a method to securely transact data in blockchain comprising re-encryption of messages using a digital signature using the ECC algorithm wherein the ECC algorithm validates the messages with reduced key size.

No. of Pages: 15
No. of Claims: 4
Title of the invention: AN EXTENDABLE AND HEIGHT ADJUSTABLE CEILING FAN WITH EJECTABLE BLADES

Abstract:
An extendable and height adjustable ceiling fan with ejectable blades is essential to make the ceiling fans to suit any living space irrespective of the size of the living room or height of the ceiling of the living room. The invention aims at designing and implementing a height adjustable ceiling fan which is based on Internet of Things to save the usage data regarding the fan from time to time. Also the fan is enclosed with plurality of sensors to control the fan from the mobile phone of the user along with child lock mechanism. The height of the piston is adjusted using an actuator and the blades of the fans are also extended to suit the living space. The important aspect of the invention is to save Non-renewable energy resource and to record the usage of fan data on daily basis. The data regarding the usage of fan will be saved on a cloud server that can be used for future references.
Title of the invention: SOLAR BASED SMART IRRIGATION SYSTEM

Abstract:
Solar energy has very high potential around all parts in India. For this motivation, the irrigation of numerous crops in these areas with photovoltaic (PV) energy systems is steadily gaining more interest. Agriculture has been backbone of India since it provides livelihood for many people in rural areas. The aim of the present innovation is to provide smart solution to the farmer who solely depends on agriculture. This innovation brings smart solution to all level of agriculture land including small, medium and large along with the automated irrigation system. This smart irrigation system constructed through the support of different sensors including soil moisture sensor, humidity sensor, and temperature sensor along with nitrogen, phosphorus and potassium measuring units. The GSM module integrated with this irrigation system makes this system as wireless system and feeds information about the particular field every time through sms alert. The solar grid acts best section in this system which provides power supply to entire circuits in this irrigation system. This innovation increases livelihood of farmers because it provides solution to the interrupted power supply which tends to damage or lower the crop production rate or yield.

No. of Pages: 8
No. of Claims: 5
A SMART AND DIGITALIZED KNOB FOR A GAS STOVE ALONG WITH A DEVICE TO CHECK EFFICACY AND SAFETY FACTORS

Abstract:
The smart and digitalized knob for a gas stove along with a device to check the efficacy and safety of the LPG cylinder is essential for saving the non-renewable energy resource. The invention aims at designing a smart knob to set the temperature of each and every knob individually that is present on the gas stove. The user can set the temperature of the burner using the knob to the specified degree Celsius. Thus the pipeline from the LPG cylinder is connected to a value which will control the flow of the gas accordingly using the flow meter. The knob can also be a digitalized knob supported by a touch screen display. The invention also has a child lock setup system and thus helps to avoid fire accidents that occur because of unauthorized users. The information regarding the usage of gas by each and every burner will be saved on hourly, daily, weekly and monthly basis. Also the smart device which collects all these data will be connected to the cloud server and the same data can be used for analysis and report generation.

No. of Pages : 31 No. of Claims : 10
# IOT BASED ODOR DETECTOR AND ALERT SYSTEM IN PUBLIC TOILETS

**Abstract:**
Hygiene is one of the major issues prevailing in the environment when it comes to maintaining public toilets. The problem with most of the toilets is not clean, and most of the times which prevents people from using it. Due to this, human are prone to an enormous number of chronic diseases that includes malfunctioning of the kidneys, and other urinal infections. The current invention helps in analyzing this social issue by detecting the odor in the restrooms and gives alerts in the form of messages to the concerned authorities. And minimal automatic cleaning will be done before the authorities take necessary actions. By using this cost effective device, the restrooms can prevent people from contaminating the environment and motivating them to lead a healthy life.

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**No. of Pages:** 10  **No. of Claims:** 4
EVMC-SYSTEM: ELECTRIC VEHICLE CONTROL AND MONITORING SYSTEM USING IOT

The Invention EVMC-SYSTEM: ELECTRIC VEHICLE CONTROL AND MONITORING SYSTEM USING IOT

The utility model provides a real-time monitoring, notification system in an electric vehicle Using IOT Technology. The monitoring system comprises a vehicle-mounted terminal and a monitoring center. The vehicle-mounted collects monitoring information related to an electric vehicle according to a first period, sends the monitoring information to the monitoring center according to a second period, receives alarm information sent by the monitoring center, and triggers a warning operation based on the alarm information. The monitoring center is used for receiving the monitoring information from the vehicle-mounted terminal, analyzing the monitoring information, and sending the alarm information to the vehicle-mounted terminal if a storage fault is judged.

No. of Pages: 28 No. of Claims: 9
V-ATM: INTELLIGENT VIRTUAL BANK WITH AUTOMATED TELLER MACHINE

Our Invention V-ATM® is an automated teller machine (ATM) which includes a plurality of peripherals including an Indian user interface for interacting with a user providing user information; a plurality of virtual automated teller machines (V-ATMs) resident in the ATM, the V-ATMs networked to a plurality of financial institutions, each V-ATM capable of using its own ATM intelligent software application and capable of providing its own colour full, interactive menu of banking options to the Indian user; and an interface to communicate between the V-ATMs and the plurality of peripherals, receive the user information from the user interface, identify the user's financial institution, University and other financial organization link the user with the user's financial institution, University etc. through a selected V-ATM corresponding to the user's financial institution and provide the menu of banking options to the user as if the user were using an ATM dedicated to the user's financial institution.
## Title of the invention:
MICROWAVE SHIELDING AND STRUCTURAL DAMAGE PREVENTING COMPOSITE MATERIAL HELMET FOR DISTRESSING BRAIN

### Abstract:
According to this invention a microwave shielding and structural damage composite material helmet with considerable microwave attenuating and large mechanical load bearing case material is prepared. The composite helmet material comprise of certain high electrical and magnetic nature of particles and fibre materials as a combined form and produce EMI shielding with good mechanical strength, which is very danger for human brain for people who works in high electrometric wave prone mobile phone towers. The mobile phone towers emit microwaves in the range of 880MHz to 2.6 GHz during communication.

No. of Pages: 12 No. of Claims: 10
Title of the invention: FRAUD RESISTANT CROWDFUNDING SYSTEM USING ETHEREUM BLOCKCHAIN

Abstract:
The Blockchain is a distributed, decentralized and immutable database system built on top of P2P network through which digital assets can be transferred securely from all over the world. After the successful implementation of Blockchain in Bitcoin, many applications and platforms evolved for the development of Blockchain technology. Ethereum is one of the most widely used Blockchain platforms for developing the Dapps. In this invention, we present the specifics of functioning, drawbacks and problems in the current crowdfunding platforms like Kickstarter. Using Ethereum and the concept of smart contracts, the crowdfunding platforms can be implemented in a secure and profound way without being afraid of the fraudulent spending of the money raised through the funding.
**Title of the invention:** PERMISSIONED BLOCKCHAIN NETWORKS USING HYPERLEDGER FABRIC

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**Abstract:**

After the proliferation of bitcoin, the underneath concept evolved is called Blockchain. The little Blockchain technology is successfully implemented in some applications and platforms, where most of them are permission less and public Blockchain. In permission less Blockchain network, anyone can join and access the network while participating in all kinds of transactions within the network short of any restrictions. Generally, in large- or small-scale organisations permission less network is not suitable. Hence, the organizations require permissioned Blockchain to have more control and privacy over the network. One such platform allowing us to build such enterprise-grade permissioned Blockchain is Hyperledger Fabric. This invention deals about Hyperledger Fabric, its architecture and the procedure to build the Hyperledger Fabric network using docker container technology for an industry use case which would involve multiple actors/organizations who want to form a permissioned network. This invention also discusses about developing the chain code (smart contract) for Hyperledger fabric using node js, and building a REST API to interact with the Fabric network using Fabric Node SDK.

No. of Pages: 19
No. of Claims: 3
There are various diseases that can benefit from targeted drug delivery. Many of these diseases occur in areas like stomach and the intestine. These diseases are hard to cure as there is no way to apply medications directly to the affected area. Some of them are Ulcerative colitis, Irritable bowel syndrome, Pancreatitis, Colon cancer, Chrons disease. As all of the above-mentioned diseases occur in the GI tract it is very difficult to apply medications to them. The some of these diseases are not even curable and the medications are only used to reduce the intensity or eradicate the symptoms that the patients are facing. Traditional methods are being used for a long time for the treatment of these diseases but many of these traditional methods have heavy trade-offs that the professionals who suggest these medications have to deal with also the effects of such medications may differ from patient to patient making the entire scenario very dynamic. Most of the treatment for such diseases involve taking oral medications like capsules and tablets. These capsules and tablets contain drug for the specific disease and are designed to dissolve in the gastro intestinal tract and apply medication to all the general areas of the tract. The dosage is usually limited as many of these drug cause side effects in many patients. Some of these drugs have a very high percentage of causing side effects. These issues can be fixed by using drug delivery which will allow the deployment of medication to only the affected area and in the desired quantities without affecting the other areas of the GI tract or prescribing a higher dosage to void absorption. Drug delivery has the potential to instantaneously solve these issues that are faced by traditional methods of applying medications. A targeted drug delivery capsule can be used to fix such issues which can dispense medication directly to the affected area without dissolving in the entire GI tract and causing side effects. The capsule can be triggered by a medical professional to dispense the medication in the patients body when it reaches the affected area. The professionals will then be able to dispense the medication in the affected area and provide an appropriate dosage without worrying about the dose being spread in the GI tract.

No. of Pages : 10 No. of Claims : 1
Data compression becomes a vital and pivotal role in the process of computing as it helps in space reduction occupied by a file as well as to reduce the time taken to access the file. The present Invention relates to a system for compressing and decompressing a UTF-8 encoded stream of data pertaining to Lempel-Ziv-welch (LZW) and method of operation thereof. It exhibit significant data compression improvement over prior art methods. Many applications use Unicode text that it is worth using a special-purpose LZW compression scheme. The system of the present invention comprises a compression module, configured to compress the Unicode data by creating the dictionary entries in Unicode format. This is achieved by providing an adaptive characteristic in which a pair of data compression tables are constructed based on the data which is to be compressed reflecting the characteristics of the most recent input data. The decompression module, configured to decompress the compressed file with the help of unique Unicode character table obtained from the compression module. We can have remarkable gain in compression, wherein the knowledge that we gather from the source is used to explore the decompression process.

No. of Pages : 15 No. of Claims : 6
The invention relates to hormone administration for inducing maturation and spawning in fish. The invention further relates to the induction of maturation and spawning in Milk fish (Chanos chanos). The invention relates to an intramuscular hormone implantation formulation and method of preparation of the formulation and dose and dosage of administration for induction of maturation and spawning in fish. The hormone pellet implant formulation for inducing maturation and spawning in fish, comprises of cholesterol; combined hormone mixture and additive. The present invention relates to development of methods of hormonal therapy for captive spawning of milkfish as this fish does not spawn naturally in tank based system captivity.

No. of Pages : 40 No. of Claims : 11
Title of the invention: A NOVEL ULTRA-HIGH VOLTAGE GAIN DC-DC CONVERTER FOR HYBRID APPLICATION OF ROOF-MOUNTED SOLAR PV SYSTEM AND ELECTRIC VEHICLE

Abstract:
The worsening of global energy crisis has been one of the most important issue around the world in recent past, thus the interest towards vehicle powered by renewable energy sources is gaining high momentum. The day is not far when the whole sky will turn grey, due to the intense use IC engine propelled vehicles. A strong customer need for a battery powered electric vehicles has been increasing since the transport sector is considered to be contributing heavily towards greenhouse gas emission. A modern technological development in photovoltaic (PV) solar generating modules provides the possibility of Roof Mounted Solar Array based Electric Vehicle (RSC-EV). They have the exact advantage of no cost energy input, but the variability in the dc voltage from solar array is limited. Therefore, high gain DC-DC converter becomes the essential part of the RSC-EV. For example, outputs of PV units are usually in the form of low dc voltage (48-60Vdc). To run the cabin temperature control module, the generated voltage from the RSC should be transformed to a higher level (250-300Vdc) and invert it to 230Vac (RMS), 50Hz to drive the compressors. In this case, the dc-dc converter with high voltage gain is required. During recent years, great efforts have been made to constructing novel topologies to realize high step-up dc-dc conversion, and the achievements mainly include the voltage multiplier, switched capacitor/inductor, voltage-lift, coupled-inductor, and cascade techniques. However, high voltage gain can only be obtained at the cost of complicated structures, which has decreased the efficiency and increased the cost. Thus the proposed invention presents a novel method to obtain a high voltage gain with amplified topology, that is a switched Z-source switched-inductor dc-dc converter (SZSIC) is developed to overcome the above mentioned issues.

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7) Manish Bharat
8) Burri Ankaiah
9) Vidyashree.K
10) G.B. Madhusudhan
**Title of the invention:** A **EFFICIENT METHODOLOGY AND SYSTEM TO CALCULATE THE UNITS OF ELECTRICITY CONSUMED BY EVERY PRODUCT**

**Abstract:**
An efficient methodology and system to calculate the units of electricity consumed by every product or an electronic appliance on timely basis is the need of the hour invention, since it is very important to save the non-renewable energy resources. The proposed system aims at calculating the units of electricity consumed by each and every individual electronic product or appliance on hourly basis so that the user can know the electricity of each and every appliance and try to cut down its usage accordingly. The plurality of sensors that are attached to the appliances will read the units and save a copy of data within them after sending it to the main board which will have the data regarding the usage of electricity of the entire building. Also the data regarding the electricity consumption is stored on a cloud server along with alert messages to the user of the appliance so that they can plan the consumption for the month accordingly.

**No. of Pages:** 17  **No. of Claims:** 7
Title of the invention: DYNAMIC OUT-OF-HOME ADVERTISING SYSTEM BASED ON REAL-TIME VIEWERS BIOMETRIC INFORMATION

Abstract:
ABSTRACT: Title: Smart Electronic Device and System for Object Preserving and Tracking
The present disclosure proposes a smart electronic device and a system for object preserving and tracking. The system comprises an authenticating module 101, a recording module 102, an object preserving module 103, a storage module 104, an object search module 105, a tracking module 106, and a display module 107. The smart device for object preserving and tracking utilizes real-time kinematic positioning and GPS to assist users in placing several objects in a specific place and retrieve them whenever necessary. The system provides a secured authentication within the smart electronic device to restrict unauthorized users from locating the hidden objects. The system enables the user to store property documents or other valuable assets or objects and recover them whenever necessary and also allows to feed the details of the preserved object and thereby differentiate multiple objects with same names based on the stored time. Further, the smart electronic device indicates time with illumination to enable the user to view the device under low light conditions. Thus, the smart object preserving and tracking system can also assist dementia patients in preserving and finding the objects.
**Title of the invention:** METHOD FOR MEDICAL IMAGE PROGRESSIVE TRANSMISSION BASED ON SALIENT OBJECT DETECTION

**Abstract:**

ABSTRACT A method for medical image progressive transmission process based on salient object detection comprises identification of attentive part, segmenting the part, compressing the part, encoding the part and finally transmitting the part. The said method has two parts such attentive part and remaining part, wherein remaining part is transmitted after the attentive part. The compression is done by Lossy compression technique and encryption by non-linear chaotic map technique. The method of medical image transmission transmits the image with good quality and eliminates the unnecessary pixels which decrease the transmission time.

**No. of Pages:** 15  **No. of Claims:** 6
The present invention relates to the field of processing impulsive noise by using soft threshold methodology. An active noise control system (1), said system (1) comprises a noise source (21), a primary recording means (22), an error recording means (23), a sound producing means (24) and a processor (31), said processor (31) comprises a mixed signal controller (33) characterized in that said controller (33) comprises of soft threshold module.

No. of Pages : 19 No. of Claims : 10
The present invention helps to measure the quantity of ice cream products stored inside each and every tray of storage box. An ice cream storage freezer box (1) comprises an lower compartment (2) and an upper compartment (3) characterized in that said freezer box (1) comprises a plurality of storage rack (22) movably mounted on the lower compartment (2) and plurality of weight measuring means (61) disposed on the storage rack (22), said measuring means (61) are connected to the control unit (71). The monitored data is communicated to the supplier through IoT. FIG-1.
The present invention provides an efficient FFT based hyper-spectral image compression method to store multiple acquisitions over the same region of interest and thereby, improve SNR of hyper-spectral images which usually have coarse spatial resolution. The present invention meets the computational complexity and time bound of a typical hyper-spectral payload. Also, this method of improving SNR exploits proper utilization of storage space and transmission rate. The present invention accommodates all the spectral bands of HSI in a compact representation space, namely VCS to assimilate variations present along the spectral dimension. This VCS representation allows one to analyze per-pixel purity of spectral signatures and offers the provision of an additional quality assessment band with minimal cost. Figure 1

No. of Pages : 31 No. of Claims : 6
AN AUTOMATED DIABETIC CHECK DEVICE AND A SYSTEM TO STORE RESULTS ON CLOUD FOR REPORT GENERATION

Abstract:
An automated diabetic check device and a system to store results on cloud for report generation is the invention that aims at implementing a system to check the blood glucose level of an individual by himself without depending on the caretaker to do so. The proposed invention has the automated needle system and the strip ejection mechanism for checking the blood glucose level by itself so that the user need not have to insert the strip and drop the blood on to the strip immediately which is a tedious task. The invention also includes a mechanism for automated pricking and recording the results on the cloud for future analysis and report generation. The device will help the patient to get the diagnosis of blood glucose done by themselves rather than going to diagnostic centers or laboratories.
Title of the invention : AN AUTOMATED IOT BASED BLOOD GLUCOSE MEASUREMENT DEVICE ALONG WITH LED INDICATION

Abstract:
An automated diabetic check device and a system to store results on cloud for report generation is the invention that aims at implementing a system to check the blood glucose level of an individual by himself without depending on the caretaker to do so. The proposed invention has the automated needle system and the strip ejection mechanism for checking the blood glucose level by itself so that the user need not have to insert the strip and drop the blood on to the strip immediately which is a tedious task. The invention also includes a mechanism for automated prick and recording the results on the cloud for future analysis and report generation. Even the layman can understand the results with the help of LED Lights which will indicate the result through red and green lights. The device will help the patient to get the diagnosis of blood glucose done by themselves rather than going to diagnostic centers or laboratories.
In Bone Paget's disease, osteoporosis and osteoarthritis is a condition in which the bones are soft and weak and may be deformed, painful, or easily broken. The condition of fragile bone leads to increased susceptibility to fracture. A bone regeneration biomaterial is required to mimic the natural structure of bone which enables effective bone reconstruction. In the present invention, Hydroxyapatite (HAp) is a hydrated calcium phosphate ceramic which has a structure similar to natural bones and is classed as bioactive. HAp integrates into the surrounding bone structure without dissolving and hence supports growth. Polycaprolactone (PCL) has the potential to modify the surface property to provide better interaction with biomaterial. Agarose, which is a natural polymer that provides excellent mechanical strength and porous structure to help cell ingrowth. Alendronate is a bisphosphonate used to treat softness of bone and increase the strength of bones. This invention also exploits the function of HAp/PCL scaffold for efficient alendronate delivery for bone regeneration. HAp/PCL structures loaded with alendronate prepared by solvent evaporation technique or emulsion technique. Also, Hydroxyapatite(HAp)-Agarose structures loaded with Ciprofloxacin prepared by precipitation and solvent evaporation technique for biocompatible and anti-bacterial drug that helps to treat the disease. The controlled bisphosphonate drug release of the system function improves the growth factor and bone regeneration.
Title of the invention: A NOVEL METHOD TO PREPARE SELF-COMPACTING CONCRETE USING SINGLE ALKALI ACTIVATED ASH BASED CONCRETE

Abstract:
In this invention activated flyash is used to enhance the compressive strength of concrete. Various non-destructive tests such as Rebound hammer test and Ultrasonic pulse velocity test are carried out to determine compressive strength of concrete and to compare it with the conventional concrete. Flyash incorporated concrete is estimated for various proportions of flyash for curing period of 7, 14 and 28 days. This invention also compiles SEM analysis to determine the particle size distribution and also to trace out the silica phase of concrete.

No. of Pages: 17  No. of Claims: 5
Evolution of early period to the modern period is mainly due to the advancement in technologies. Every field has its own development in their innovations. Agriculture is the major field, where technological advancement is required for the development. Major purpose of our paper is to establish a new kind of Lawnmower. Here we have developed a semi-automated lawnmower which may be a replacement for commercial manual lawnmower that is being used widely. This device doesn’t require any manpower for their operation, it can be operated by an android device. Commercial lawnmowers are bulkier and are not compatible, but this device is compatible and light-weight. Since it is made up of UPVC (Un-plasticized polyvinyl chloride). Generally alternating current or fuels are used as a power source for commercial lawnmowers whereas this device can be operated by means of battery or solar source.
Abstract:
The system and method for creating Biz View Business Intelligence Dashboard. It manages the data in an excel database, or APIs or any standard software packages and Create for client own centralized Dashboard which can be accessed anywhere anytime. In these host in a Secure Cloud Environment Which Centralize client data at one location. All the data is stored in one location with 24x7 backup facility with 99.99% guaranteed uptime. The Data scrubbing called information cleansing, it amends or remove information in a database that is incorrect or altered. In menu option it provides various charting options to client wish to create a line chart or bar-chart. It also provides Online Pivot charts so client can work like an excel online. It provides connectors to Excel, Databases (Microsoft SQL, MySQL, Oracle), Rest API, Social Media. Database size can be from 1 GB to 3 TB of information.
**Title of the invention:** ERGONOMIC WHEELCHAIR FOR GERIATRIC CARE

**Abstract:**
The wheelchair mechanism enables the patients to climb stairs without anyones help. Aids in easy access by the attender to handle the patients effortlessly, this mechanism also provides mobilization for the disabled population. This ensures reducing the probability of bed sores owing the locomotion by themselves. The wheel can be stopped at any step in climbing at any point the wheel and wheelchair get hold freely rotation of the wheel. The six-wheeled wheelchair gives more stability to the wheelchair. As a whole which provides complete comfort and stability to the wheelchair.

No. of Pages : 12 No. of Claims : 7
Title of the invention: SAFETY ALERT INDICATOR LIGHTING SYSTEM FOR PREDICTION OF VEHICLE MOVEMENT

Abstract:

Prior knowledge about the next movement of preceding vehicle is very important criteria for the driver to avoid accident within a fraction of time. While travelling on the road, the accident depends upon either the movement of the nearby vehicle or the direction of the nearby vehicle. The existing system predicts the state of the vehicle by indication of red light, which is going to stop while applying brake. Still now there is no invention for predicting the movement of preceding vehicle for making decision by the following vehicle using light indicating system. In this invention, the system provides a three indicator lighting system is mounted at the back side of every vehicle to indicate the next movement of its own for their following vehicle. The green light glow indicates the movement of accelerator applied, red light glow indicates the movement of brake applied and the orange light is glow for idle state of the driver i.e. no acceleration and no brake. The intensity of the light is also varied according to the brake applied and speed of the accelerator. The movement of the preceding vehicle is detected by using sensors. This is the simple light indicating system can be used by all the levels of people.
The present invention is related to a computer implemented modulation method which is more efficient for free space optical communication system under influence of different atmospheric and fog conditions. The objective of the present invention is to overcome the inadequacies of the prior art in data loss in modulation of signal in free space communication at different atmospheric and fog of related loss of signal.

No. of Pages : 21 No. of Claims : 9
An Organic Composition Comprising Non-Toxic Natural Ingredients for Use in Eco-Friendly Fireworks wherein the sparks and the smoke released are non-toxic and also eradicate the presence of mosquitoes, which are a major source of many diseases in today’s world. In a country like India, Mosquito menace is a big problem, leading to several diseases and posing a threat to health. The invention strives to eliminate this problem, in the form of the smoke resulting from the bursting of fireworks, which drives away such mosquitoes. The composition used in the preparation of these fireworks is unique and totally organic, which is not present or made use of in the above mentioned prior art documents. The current invention, when used in the preparation of rockets and seed bombs facilitates the growth of plants in remote hilly areas, which is not easy otherwise.
Title of the invention: REAL TIME CROP MONITORING USING INTERNET OF THINGS (IOT) BASED PRECISION AGRICULTURE

Abstract:
The present invention is related to a real time crop monitoring using internet of things (IoT) based precision agriculture. The objective of the present invention is to overcome the inadequacies of the prior art in remote monitoring the agriculture using sensor network. The system sends the real time agriculture monitoring data and alert message to mobile computing device.

No. of Pages: 21 No. of Claims: 8
Fraudulent milk adulteration is a dangerous practice in the dairy industry that is harmful to consumers since milk is one of the most consumed food products. Milk quality can be assessed by Fourier Transformed Infrared Spectroscopy (FTIR), a simple and fast method for obtaining its compositional information. The spectral data produced by this technique can be explored using machine learning methods, such as neural networks and decision trees, in order to create models that represent the characteristics of pure and adulterated milk samples. In this proposed system is widely used to detect milk adulteration in all milk production and export industry, it is very useful to detect the adulteration particles easily. The product is having compact size and easily install to the milk industry also maintenance free product.

No. of Pages : 23 No. of Claims : 6
(54) Title of the invention : IOT BASED METAL DETECTION IN FOOD PRODUCTION INDUSTRY

(57) Abstract :
In this proposed system is widely used in all food production and export industry, it is very useful to detect the metal particles easily. The product is having compact size and easily install to the industry also maintenances free product. When used for machinery protection on the protected device in front of the metal detector, such as for mechanical protection. As in most cases, in the food industry, consumer protection is our goal, in which case some checkpoints are useful. The advantage of raw materials is that they are broken down into smaller fragments, which can be difficult to detect before the metal particles are separated. Inspections at critical control points during the production process are recommended to notice machinery failures (such as broken blades) in time. The food products in their final stage after packaging are inspected once again with a metal detector (or an X-ray system) to fully exclude contamination. Inspection of recommended raw materials, some important control points, and final inspection of the final product to achieve the best product protection.

No. of Pages : 27 No. of Claims : 5
Title of the invention: SYSTEM AND METHOD FOR ANALYZING PROFICIENT AND SHELTERED DATA FORWARDING IN WIRELESS HEALTHCARE OBSERVATION SYSTEM

Abstract:
The invention involves a system and a method for analyzing proficient and sheltered data forwarding in a wireless healthcare observation system. The method includes the step of improving an overall performance of the WBSNs and avoiding interference by clustering a plurality of sensors of at least one of a single WBSN or a plurality of the WBSNs into a plurality of groups through a clique based WBSNs scheduling (CBWS) module. The clique based WBSNs scheduling (CBWS) module presents every sensor node with a list of connectivity of a plurality of neighbors of the sensor nodes in addition to degree of connections of the sensor nodes. The sensor node with a maximum degree of connection initiates a clique formation process and creates the cluster. The method includes the step of selecting an optimal cluster head through a multi-objective firefly algorithm (MOFA) module, wherein the sensor nodes in the cluster send data to the cluster head (CH). The multi-objective firefly algorithm (MOFA) module utilizes a TOPSIS based Artificial Bee Colony Algorithm (TOPSIS based ABC) for selecting an optimal path between the cluster heads(CHs); creating an appropriate tradeoff amid security and elasticity through an Improved Attribute-Based Signcryption (IABSC) module. The method includes the step of gathering physical data from a patient’s body through one or more body area network (BAN) controllers. [FIG. 1].
It has been acknowledged that library management serves a major role for the students learning. The proposed automated library management information system is based on the principle of object orientation, which allows describing both software and functionalities explicitly. Furthermore, it is illustrated how the well-known object-oriented specification language unified modeling language can be adopted, to provide an adequate formalization of its semantics, to describe structural and behavioral aspects of online personal finance management system related to both logical and physical parts. It is needed to implement the software on the basis of Object Oriented Model developed. Flaw in modeling process can substantially contribute to the development cost and time. The operational efficiency may be affected as well. In spite there are lot of functionalities rendered by mobile phones using recent emerging technologies, the mobile phones advancement deserves a major breakthrough. In a few years from now it is expected that mobile phones would replace most of the handheld systems, incorporating modern operating systems such as android 2.3 gingerbread, meego and windows phone and its emergent higher versions. In order to further enhance the features provided by the current day smartphones, an object-oriented approach would add in the developmental growth.
**Title of the invention:** THE PROCESS OF MANUFACTURING FLEXIBLE BIODEGRADABLE PACKAGING MATERIAL FROM PEANUT HULLS AND THE PRODUCT THEREOF

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**Abstract:**
The nonbiodegradable plastic wastes rapidly generated by single-use food packagings are a major factor causing pollution to our environment. The upcycling of biomass produced from food processing industries and agricultural lands for packaging applications reduces the concern of these litters. The peanut hulls are a major byproduct of peanut processing industries or farms, which are usually burnt off or dumbed either contaminating the air or creating a burden. The present invention relates to the process of development of flexible biodegradable packaging from peanut hulls. The packaging material made thereof is flexible and can be used for various applications by altering the properties.

No. of Pages: 11
No. of Claims: 3
Many power electronic converter devices are used in industries as well as in domestic applications. The power converter loads offer highly non-linear characteristics in their input source currents. The shunt active power filter (Fig: 2) is designed to compensate harmonic currents and fundamental reactive power. The shunt active power filter is injected into the network the harmonic current consumed by the load but in opposite phase so that current source presents a pure sinusoidal waveform. Hardware model Shunt active power filter (Fig 2) consists of H bridge inverter which rectifier based de motor acts as a non linear load (Fig: 4) single phase supply for mitigation of harmonies in the source current waveform (Fig: 8). Total harmonic distortion value for source waveform before compensation (Fig: 6) is =5. THD value is calculated using FFT. Source current value, power used by non-linear load (Fig: 4) with shunt active power filter were calculated by smart meter (Fig: 9) and stored in online database (Fig: 11).

No. of Pages : 17 No. of Claims : 9
Air and noise pollution serves to be one of an alarming problem in smart cities at present. It is considered so because it is increasing day-by-day and more by means of modern transportation methodologies. The rapid population and urbanization has paved way to various health issues and pollution is one of the frightening dilemma among them. According to a survey, more than 7 million deaths are recorded every year around the world and primary health issues are recognized as cancer, heart disease, and asthma. Although various preventive measures and strict acts prevail in countries to counterpart pollution, still it is unavoidable and uncontrollable. With the aid of improvising technology, we have proposed a novel two-method embodiment to monitor both air and noise pollution in an urban place or smart city. One form of idea is to implement a monitoring module with microcontroller interface along with internet-cloud platform at crowded and sensitive places like industries, schools, and hospitals; While the second embodiment is to implement the module in a vehicle and monitor the air index as well as sound intensity and fine them when default value is attained.

No. of Pages : 14 No. of Claims : 5
Title of the invention: HIGH-FREQUENCY PLASMATRON

Abstract:
The high-frequency plasmatron is designed for obtaining a high-temperature plasma jet in the inductor zone of a high-frequency induction generator, adjusting the composition and gas-dynamic properties of the plasma jet within a wide range, as well as supplying dispersed powder materials to the melting zone.
A self-revival writing instrument comprising: a hollow elongated housing body (101) having opening at the front end (109) and back end (110); a cylindrical reservoir (102) for holding writing fluid preferably an absorbent material and dispensing through the writing element (105) on a writing surface; the writing element (105) is adapted into the opening provided in the centre of pointed member (104) where one end of the writing element (105) is inserted into the cylindrical reservoir (102) and the other end of the said writing element (105) is projected outside; the pointed member (104) having two portions wherein the lower portion (112) of the said pointed member (104) is hollow frusto-conical body having an opening (113) at the centre to accommodate the writing element (105) tapered from top to bottom and the upper portion (111) of the said pointed member (104) is hollow and internally or externally threaded to fasten with the housing body (101); an adaptor (103) is fastened longitudinally along the inner circumference of the housing body (101) wherein the adaptor (103) is threaded on one end (117) to connect to the pointed member (104) and other end (116) is used to fasten to the housing body (101) by any means; a closure (106) is adapted to fasten longitudinally into the outer circumference of the pointed member (104) to prevent leakage of writing fluid and drying of writing element (105); a clip (107) is provided on one side of the closure (106) to secure the device; a plug (108) is fixed on top of the clip is placed in position on the closure (106).
This invention related to Design of 3VL memory portable usage of CNTFET. 3VL is a capable opportunity to standard binary common sense, as it has better overall concert in terms of place, energy and additionally decreases intersect postpone. The planned ternary memory cellular realizes a significant saving in vicinity as related with existing layout for the reason that policies are one of a kind for CNTFET. In addition to that, this bankruptcy is to extend CNFETs based SRAM and implement it right into a VHDL-AMS. To acquire this purpose, a compact model of the transistor known as enhancement mode MOSFET-like SWCNT-CNFET is used. Circuit-well matched model of CNFET is described using VHDL-AMS and examined for simple electric uniqueness. This model is valid for CNFETs with channel lengths extra than 20nm. Based on the CNFETs a new SRAM is designed, and carried out in VHDL-AMS. The overall performance of the proposed SRAM mobile is investigated and in comparison with SRAMs from conventional MOSFETs. The effect of substrate biasing a CNFET is also confirmed and carried out in designing the SRAM cellular. The VHDL-AMS codes of the CNFET and the SRAM are simulated in software program called AnsoftSimplorer. The compact model of the CNFET is prepared hierarchically in three essential ranges. The first degree models the intrinsic channel simply beneath the gate of the transistor. The second level builds upon the first stage and fashions the doped supply and drain areas of the CNFET. The final stage represents the whole trans-capacitance version of the transistor and accounts for more than one CNTs. The proposed SRAM cell is composed of 4 CNFETs and load resistors. The driver CNFETs of the proposed SRAM cell are substrate biased. Besides, eight-bit entire SRAM structure based on this cell is indicated. The performance analysis of the SRAM indicates that it has better writing and analyzing velocity as well as better stability whilst in comparison with SRAM from traditional MOSFETs. Specifically, the newly proposed SRAM mobile has read time of twenty 5 % seconds, write time of 20p.C.Seconds and might tolerate a noise of 120 mV at 32 nm node technology. Further a layout of a 3ValueLogic 9T reminiscence cell using CNTFETs. In 3VL judgment 9T memories portable based CNTFET were advanced and general HSPICE simulations had been finished in accurate situations. CNTFET 9T primarily based This document provides a layout of a 3ValueLogic 9T reminiscence cell using CNTFETs. The carbon nano tubes with their advanced delivery houses, superb modern skills ballistic shipping operation, and three-cost good judgment had been planned for 8T SRAM mobile implementation in CNTFET generation. The CNTFET design to achieve the exclusive threshold voltages.
Disclosed herein botanical oil based formulations for larvicidal, pupicidal and for ovipositional repellency against disease causing mosquito vectors in their aquatic habitats which comprises one or more active oil (s) selected from eucalyptus, pine, 10 citronella and clove oil, one or more emulsifier / surfactant selected from Tween 20, Tween 40, Tween 60, Tween 80, and Triton X 100, a carrier oil selected from a vegetable oil / methylated oil and an anti-oxidant / stabilizer. The formulations can be in the forms of emulsifiable concentrate as uniform dispersing or top floating, nano-emulsion emulsifiable concentrate, gel concentrate, either as hydrophilic or 15 hydrophobic and gelatine encapsulated emulsifiable concentrate. The formulations are effective against mosquito vectors such as Aedes aegypti, Aedes albopictus, Anopheles stephensi, Anophelessubpictus, Culex quiquefasciatus which are known to be transmitting various diseases including dengue, chikungunya, Zika, malaria, filarial, Japanese encephalitis and other vector borne diseases. A process for the preparation of the said formulations and a method for killing the said mosquito vectors are also disclosed. 25 30

No. of Pages : 44 No. of Claims : 10
The present invention is related in general to a device which primarily acts as a dispenser and an applicator for applying substance to a surface and in particular a device which acts as a dispenser and an applicator having a chamber to store the substances like liquid, semi-liquid, cream, powder etc. for application and for dispensing the said substances for application which can be reused by refilling the said substances. The device comprises of an applicator chamber (001) at the front end, a storing chamber (002) in the middle and a dispensing chamber (003) at the rear end which are detachably attached serially to refill the substance in the storing chamber (002) and accordingly functions together.
The invention is related to development of an internet of things (IoT) enabled wearable device for monitoring health, fertility and milk production of cattle. The device uses sensing, communication and intelligence for efficiently sensing cattle body temperature, movement behavior, rumination, bellowing and cattle location employing temperature sensors, motion processing units (MPU), sound sensor, satellite location tracking module and further transmitting the same over internet employing internet module. The temperature, sound, acceleration, orientation, latitude and longitude from the sensors are fed to a microcontroller which generated inferences related to cattle health, location and estrous behavior based on prior learning data stored in the memory. The microcontroller sends the data procured from the sensors and the inferences directly over the internet to an internet server employing internet communication module. The inferences and data could be visualized over an application in a distant located mobile device. The device houses anti-theft detection alert feature wherein it transmits alert signal to the animal owner in case the wearable belt on which the device is mounted is deliberately broken. The device also houses algorithms to transmit data only in case of anomalies found in the animal on which it is mounted thus significantly increasing the battery life on board. The developed device is tested on real time field scenarios in cattle testing facility and farms wherein it could distinguish healthy and fever borne cattle, cattle with and without estrous behavior and could send alerts when the cattle grazes out of a selected user location. The developed device is of low cost and is reliable which shows its huge potential for developing countries like India.
This invention relates to a mandibular advancement device and in particular, this invention relates to a Mandibular advancement device for the therapeutic benefit of mandibular advancement in elderly edentulous obstructive sleep apnea patients. More particularly, this present invention relates to the Mandibular advancement device for the therapeutic benefit of mandibular advancement in elderly edentulous obstructive sleep apnea patients wherein interocclusal wafers is seated on the mandibular denture. Furthermore, this invention also relates to the mandibular advancement device which is capable of automatically, effectively, conveniently and accurately control the mandibular advancement distance.
**Title of the invention**: DISEASE ANALYSIS BY MACHINE LEARNING OVER DATA FROM HEALTH COMMUNITY

**Abstract**

Growth of big data in the field of healthcare and biomedical applications has made the analysis of medical data accurately benefiting the community by detection of the disease at an early stage, community services and timely care of the patients. But reduction of the accuracy is due to reduction of medical data quality. The data must be complete to achieve an accurate analysis of the patient. Unique characteristics are exhibited by different regions of the organs for some of the regional diseases which make the disease prediction difficult. In this invention algorithm of machine learning is implemented for predicting the outbreak of disease effectively in communities where the disease is frequently occurs. The model of latent factor is utilized for reconstructing the data that is missed which overcomes the problem of incomplete data. Real time data from the hospitals are collected on which the analysis is performed. The proposed prediction algorithm involves multimodal disease prediction based on convolutional neural network. The accuracy of prediction is more than the unimodal prediction algorithm.

No. of Pages : 13 No. of Claims : 6
The main invention to enhance IoT enabled agricultural pest control devices and monitoring system (IAPCDMS) for organic farming is to design and develop a monitoring system with the integration of a camera, temperature sensor, light intensity sensor, water level sensor, and IoT gateway device. This system allows real-time data collection and processing for pest identification, monitoring, and control. The system can be used with portable devices or solar energy units to ensure continuous monitoring without the need for pesticides that can be harmful to the environment and human health.

The system can also be used to assist farmers in producing crops without pesticides and legal restrictions. The system can be used in both indoor and outdoor settings and can be accessed remotely for monitoring and control. The system also allows farmers to take necessary remedial measures regarding control of the pest. The system can be used to accurately identify and control pests in a degree of precision, making it an important component of this invention.

The main intention of the aforementioned research is to design and develop an Internet of Things (IoT) enabled agricultural pest control device with solar cells as an integral component. This invention involves IoT-enabled agricultural pest control devices with solar cells as a major energy source for lighting and water heating purposes. Additionally, this development comprises IoT-enabled wireless sensor networks for pest detection, better coordination, management of the pest control device, and maintaining the status of the device.

The idea behind this invention is to assist farmers to produce crops without being affected by any pesticides that can prevent human health hazards as a consequence. This invention reduces farming costs and incentivizes farmers for organized farming. IoT-enabled pest monitoring and control system composes with water heated, solar panel, rechargeable battery, temperature sensor, light intensity sensor, water level sensor, sensor node/master device, local data gathering, unit/s slave device that help to transfer data into a cloud unit with the help of IoT-enabled gateway unit/device, and agricultural application server. In a rural setup, different types of environmental hazards are presented which can directly have an adverse impact on IoT-enabled agricultural pest control devices. Besides, the pest control device uses water for pest killing. This invention does not use any pesticides, which can produce deleterious impact leading to health hazards as a consequence. This invention reduces farming costs and incentivizes farmers for organized farming.

The main component of this invention involves IoT-enabled agricultural pest control device with solar cells as an integral component providing major energy source which is used for lighting and water heating purposes. Additionally, this development comprises IoT-enabled wireless sensor networks for pest detection, better coordination, management of the pest control device. IoT-enabled pest control device integrates different physical sensors for light intensity sensing, monitoring water level, and temperature of the water. IoT-enabled pest control device incorporates a camera for pest detection and forecasting. The idea behind this invention is to assist a farmer to produce a crop without being affected by any pesticides that can prevent human health hazards as a consequence. This invention reduces farming costs and incentivizes farmers for organized farming. IoT-enabled pest monitoring and control system composes with water heated, Solar panel, rechargeable battery, temperature sensor, light intensity sensor, water level sensor, sensor node/master device, local data gathering, unit/s slave device that help to transfer data into a cloud unit with the help of IoT-enabled gateway unit/device, and agricultural application server. In a rural setup, different types of environmental hazards are presented which can directly have an adverse impact on IoT-enabled agricultural pest control devices. Besides, the pest control device uses water for pest killing. This invention does not use any pesticides, which can produce deleterious impact leading to health hazards, therefore it requires regular maintenance, support, and coordination. Hence, real-time monitoring of the device is an important component of this invention. Real-time monitoring of pest control devices also requires a pest control device maintenance process. A portable wireless sensor node/master device can easily collate real-time physical parameters for agricultural pest control devices and transfer them to the small local slave units. Smart local slave device clean, preprocess, aggregate and upgrade these data and transfers them directly to the cloud server through IoT gateway device. An authorized user can access this data without having to encounter any physical challenges. According to these real-time data, the user can decide directly whether the device requires immediate and imminent maintenance support or not. Processing data also graphically displays the current status of the device that is entrusted with the monitoring process. If the agricultural application server notices any abnormality or ambiguity of the gathering data then automatically it generates an alarm for the farmers. Further, real-time monitoring is a prerequisite for early pest detection. The control device captures real-time pest images and does the necessary transfer of these images to the agricultural application server for detection through IoT-enabled wireless sensor networks. The application server processes the images that have been captured and forwarded and graphically displays the current status of the pest. If a multitude of pests is detected then automatically there is the generation of an alarm for the farmers. The agricultural application server also finds out the location of the position related to the pest attack region within the agricultural zone. Therefore, farmers or users can easily identify with a degree of precision the pests attack in crop zones and take proper necessary remedial measures actions regarding control of the pest.

No. of Pages : 26  No. of Claims : 9
Disclosed in the invention is a device that will continue to monitor the pulse, heartbeat and such body vitals to determine if the person is in anxiety, stress or has initiated the depression. Based on that device will start interacting with the person. The device has the capability to learn quickly from the previous interactions and will try to console the person based on it. It has SOS unit as well to inform the concerned person in cases of emergencies.
METHOD FOR CYBER SECURITY IN EMAIL COMMUNICATION AMONG NETWORKED COMPUTING DEVICES

The present invention is related to computer implemented method for cyber-security in email communication among networked computing devices. The objective of present invention is to solve the anomalies presented in the prior art techniques related to for cyber-security in email communication in a network connected computing devices.

No. of Pages : 21 No. of Claims : 6
Title of the invention: SYSTEM AND METHOD FOR CHILIKLA LAKE TOURIST AND SCIENTIFIC MANAGEMENT

Abstract:
The present invention discloses a unique System for searching Chilika Lake resources easily for the purpose of research and recreation. The system provides a two-tier classification and further includes the basic and detailed information about Chilika Lake. The system includes sections such as Dolphins, Birds, Boating, Weather and research. The sections are organized as per the need of the user. The system will provide the best routes to each tourist location, the available flora and fauna, the facilities like boating, specific stores to avail Chilika fishes and so on.

No. of Pages: 18
No. of Claims: 10
Title of the invention: RECONFIGURABLE POSITIONING MECHANISM

Abstract:
Disclosed is a reconfigurable positioning mechanism comprising a platform and at least three guide rails arranged perpendicularly to each other on the platform. The reconfigurable positioning mechanism comprises a ball slot provided within each of the at least three guide rails, at least one ball received within each ball slot, a linear actuator disposed with each guide rail, a slider movably arranged on each linear actuator using a sliding joint or a prismatic joint, an external link operatively coupled to each slider and an end-effector connected to the end of each of the external link that is disposed towards the centre of the platform via a rotary joint. The reconfigurable positioning mechanism is configured to provide translational movement of the object arranged on the end-effector along at least two mutually perpendicular horizontal axes and rotation of the object arranged on the end-effector along a vertical axis.

No. of Pages: 24 No. of Claims: 10
Abstract:
Disclosed is a planar parallel manipulator using shape memory alloy actuator for moving an object. The planar parallel manipulator comprises a fixed base platform, a movable platform configured to receive the object to be moved, at least four supporting members arranged on the fixed base platform, a guide arranged along each of four sides of the fixed base platform, a shape memory alloy spring connector as an linear actuator configured to receive a supporting member, a guide end spring connector arranged at each corner of the fixed base platform; and a spring coupling each spring connector to a pair of adjacent guide end spring connectors. The spring is fabricated using shape memory alloy that is configured to retain an original shape thereof when no external heat is applied to the spring. Furthermore, the planar parallel manipulator is configured to cause translational movement of the object along two perpendicular horizontal axes and rotational movement of the object about a vertical axis.

No. of Pages : 30  No. of Claims : 10
The present invention generally relates to a personal care or cosmetic composition. Specifically, the present invention relates to a cosmetic composition comprising of natural substances such as Livistona jenkinsiana fruit pericarp, Gymnocladus pod, Sapindus mukorossi fruit, Cereals, Citrus peel, Papaya fruit and coffee seeds containing natural detergent. The cosmetic composition of the present invention is useful as body scrub to exfoliate dead skin cells and clean from the face and other parts of the body and also as skin polisher. The present invention also provides a method for preparing the eco-friendly cosmetic composition containing biological scrub with natural detergent.

No. of Pages : 23
No. of Claims : 12
The present invention provides compositions of antioxidant composition comprising extract Albizia lebbeck and silymarin and demonstrated potential antioxidant activity. The composition can further be formulated into gel or film for application to the skin.
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:

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(54) Title of the invention : PROCESS FOR SEPARATING CHLOROCARBON FROM OLEFIN FEED

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(57) Abstract :
The present invention relates to a process for separating chlorocarbon from olefin comprising one or more selected from R-1234ze, R-1234yf, vinyledenefluoride, R-124a, HFP, OFCB, R-22, R-1122, R-236ca, R-226cb, R-32, TFE, trans R-1225ye, cis R-1225ye, R-1243zf, R-1234ze and R-40.

No. of Pages : 14 No. of Claims : 6
The present disclosure provides a compact interferometer to measure picometric displacements of various objects. The disclosed interferometer (100) comprises a beam source (101) for producing a beam (1), an object (105) positioned opposite to the beam source (101), an optical element (103) which is positioned between the beam source (101) and the object (105), where the optical element (103) is placed at an optical distance \( d(t) \) from the object (105). The optical element (103) is provided with a reflective coating. The optical element (103) receives the beam (1) from the beam source (101) and reflects a first portion of the beam in a first direction and passes a second portion of the beam in a second direction towards the object (105). The first direction is opposite to the second direction. The second portion of the beam is reflected back from the object (105) to produce a third portion of the beam in the first direction and the third portion of the beam is superimposed with the first portion of the beam in a region between the beam source (101) and optical element (103) for generating an interference pattern.

No. of Pages : 40 No. of Claims : 37
The Auto Research Bots or ARB are the next gen robots that provide the basis for outer space research to far distant exoplanets that lie under the goldilocks™ zone i.e. the planets that are capable of sustaining life. These robots are capable to simulate an actual human being and help to classify a planet truly sustainable for living. These robots can be considered a viable replacement for astronauts and also prevent any loss of life during the dangerous missions on outer space. The Auto Research Bot Software or ARBS is the software that will function as the soul for the auto research bots. This program is an AI program that will be written in various machine learning (ML) frameworks such as Tensor flow, Microsoft CNTK and Torch.

No. of Pages : 10 No. of Claims : 10
Title of the invention: ORGANIC FERTILIZER COMPOSITION AND A PROCESS FOR THE PREPARATION THEREOF

Abstract:
Organic fertilizer composition and a process for the preparation is disclosed. The organic fertilizer comprises 35 to 50 % by weight organic manure, 45 to 60 % by weight mixture of natural minerals and 3 to 5 % by weight premix of nutrients, herbs and minerals. The process comprises taking 35 - 50 % by weight sieved organic manure in a container. Adding 45 to 60 % by weight mixture of natural minerals at a temperature of 28 to 32°C. Subjecting said mix to the step of composting and drying. Adding 3 to 5 % by weight premix of nutrients, herbs and minerals into said container at the same temperature and then subjecting said mixture to the step of grinding followed by granulation to obtain the organic fertilizer.

No. of Pages : 12 No. of Claims : 5
The present invention is of an herbal composition comprising combination of therapeutically effective amount of herbal constituents/components extracted from Gonostegia pentandra and Lablab purpureus, in combination with pharmaceutically acceptable additives, useful for the treatment of gastric and duodenal ulcer and process of preparation thereof.
Title of the invention: A HERBAL FORMULATION FOR DELAYING THE ONSET, PROGRESSION AND FOR TREATMENT OF CATARACT

Abstract:
The present invention relates to the pharmaceutically acceptable herbal composition for delaying the onset, progression and for treating cataract and to improve human eye sight. The invention further relates to the process of preparation of the herbal formulation comprising of extracts of at least one part of Galium tricome and Senecio chrysanthemoides along with ophthalmically acceptable excipients.
polluted Smoke emitted by kiln furnace/coal chimney can easily be ended by this invention. This invention will be placed on the chimney mouth top portioned by the help of electric air blower fans polluted smoke will be transfered from below to up, and up to down into the iron hollow pipe, in this rectangular vertical iron hollow pipe water will be sprayed on the polluted smoke by the help of water spray nozzels, and polluted smoke will be cleared and after that, this clean smoke will go in the horizontal rectangular longitudinal smoke pollution control chamber and will pass from shower water tank vertical thinner wall fall in the 2nd middle portion/m the middle 2nd portion by the help of vertical rectangular steel net pad with curly iron wire filter pad polluted smoke is clean, and this clean smoke will go out from horizontal invention chamber to atmosphere. To support invention pollution control chamber, electric air blowers fans, underground water tank, electric water lift pump, water filter pad, minor holes plastic net, electric air compressor, water spray nozzels, rectangular vertical U shape iron hollow pipe, L shape vertical horizontal rectangular iron hollow pipe, small diameter hollow pipe water supplier etc., iron frame stands. When from coal furnace chimney the polluted smoke will come out, on that time with the help of water lift pump we lift the water from pipe line, then we spray water on polluted smoke, and with the help of water shower tank we continously clean the smoke. Because on horizontal smoke pollution control chamber upper portion we built shower water tank and in 2nd middle portion we provide to wash polluted smoke with water, and in bottom of 2nd middle we provide dirty water collector tank, with the help of electric water lift pump with water pipe line we put clean water to the shower water tank and water spray nozzels, and dirty water collector tank from water pipe line we put into the underground water tank in this way we clean the smoke and tranfer it to the atmosphere.
The patent office journal no. 06/2020 dated 07/02/2020

Title of the invention: SYSTEM TO RAISE THE WATER TABLE INSIDE THE GROUND

Abstract:
In today's era due to the surface of the ground inside the ground below, there is a lot of trouble growing water in drinking water and farming. We can solve this problem by using flood water with the help of our invention. We can easily use this water in many ways by bringing the flood water inside the ground. Invention part 1st, vertical straight flood water flowing system. In any flood area and river area, we can easily put it inside the ground, we have to do this by holes in the ground through a drill machine at some distance within the ground, these holes may be 100 to 200 feet or even deeper inside the ground, they can keep the width of these holes from 6 inches to more than 1 ft. We will put plastic PVC hollow pipe in these holes. This plastic PVC pipe will be 3 to 6 feet high above the ground, on the end portion of the plastic pipe inside the ground and above the ground portion, with the help of a plastic cap, we will close the below mouth of the pipe and the upper mouth. We will keep the plain hollow pipe part below the ground level. We will make a water leakage proof on the part of joint between ground level and plain pipe. We will put the gallon water meter along with the plain pipe at the ground level above the ground level. In the part of the plain pipe between the plain pipe and the plastic cap inside the ground, we will provide the big holes (phony pipes), we will provide big holes in between water meter and plastic cap above the ground, we will provide plastic minor holes net around the big holes; this plastic minor net holes will put around the phony pipe (big holes pipe) above and below the ground. When the flood water is come in rainy season, then the flood water will go inside the ground with filter net. When the period of flood water is over, then we can check how much gallon water will go inside the ground. Like part 1st of the invention, with the help of this invention part 2nd, 3rd, 4th, the problem of dry and clean water reading the world will end.

No. of Pages: 23 No. of Claims: 6
Title of the invention: METHOD AND SYSTEM OF POWDERED BIOMASS COMBUSTION HAVING HEAT DELIVERY THROUGH THERMIC FLUID AND ITS COMPLETE AUTOMATION OF OPERATION THROUGH INTERNET LINKED CONTROL PANEL

Abstract:
An internet linked combustion system meant to use dried (up to 10%) and pulverised (max 10 mm mesh size) biomass, which is forced fed in to sand filled fluidised bed combustion chamber to generate heat. Generated heat collected in to circulating thermic fluid to-be used for any thermal application like cooking or heating. Ash generated will be collected in to insulated cyclone system. System will run automatically with in preset temperature range. It will be used for economical replacement of costly and C02 emitting petroleum products- and, unsustainable wood or charcoal creating local sustainable fuel; circular economy and employment.
The present invention precisely discloses and claims a process for preparation of a conducting polymer polyaniline have been synthesised by chemical oxidative polymerization using oxide of a transition metal as a dopant. For preparation of metal oxide doped polyaniline different molar ratio of monomer like aniline was taken in aqueous solution. The monomer solution was then mixed dopant. The polymerization was initiated by the drop wise addition of aqueous solution of an oxidant. The polymerization was carried out at a temperature of 0-5 ±1.0°C for a period of 6-8 h. The synthesized metal doped conducting polymer was isolated from reaction mixture by filtration and washed with distilled water to remove oxidant and oligomers, followed by drying in the vacuum oven a definite temperature ranged between 40-80°C.
A method for the production of biofuel, the method comprises the steps of providing a plurality of raw materials from edible oil refinery, performing pyrolysis of the plurality of raw materials in a reactor at a bed temperature of 500 - 550 °C to obtain a liquid and performing distillation of the obtained liquid to make fractions. Further, the pyrolysis is performed in the presence of a catalyst. In addition, the solid by-product produced is a char that has high amount of essential nutrients like potassium and phosphorous which are essential for plants. The high calorific value gas produced during pyrolysis is captured separately and further used as a biofuel alternative.
A pull case grip (300) for a vehicle door is disclosed. The pull case grip (300) having a cup shaped profile (302) including an internal wall (304) integrated with an external wall (306) to define a gripping shape (308); and a plurality of snaps (310) provided on the external wall (306), wherein, an orientation of the plurality of snaps (310) is parallel to a main axis draft (MD) associated with installation of the pull case grip (300) with an armrest of the vehicle door trim.
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(57) Abstract:
The present subject matter disclosed herein relates to a rear floor body structure (100) for damping vertical load applied through rear suspension. The rear floor body structure (100) has rear wheel houses (101) provided at both sides of vehicle in vehicle width direction (WD) to receive the suspension loads and a rear floor panel (102) provided in between the rear wheel houses (101) in vehicle length direction (LD). The rear floor panel (102) along with a rear long member (104) is joined with the rear wheel houses (101) at both sides. A gusset (103) is provided in between the rear floor panel (102) and the rear wheel houses (101) at both sides. Each gusset (103) is provided inside the rear long member (104) and at the intersection of the rear floor panel (102) and the rear wheel houses (101) which is vertically below the rear suspension mounting location (101a) to increase the structural rigidity of the rear floor body structure.
The subject matter disclosed herein relates to a brake vacuum pressure switch diagnostic system (BVPSD) (301) and a method (400, 600, 700) implemented in Engine control unit (ECU) (300) to diagnosis or detect malfunction in the brake pressure switch. The BVPSD system (301) has a counter increment block (305) to increase a counter CI by one when vehicle engine starts after vacuum leakage time period days (x) and a brake pressure switch fault detection module (306) which detects condition of the brake pressure switch in brake booster and determines whether the brake pressure switch is in open state or in close state. When the brake pressure switch is in open state, the brake pressure switch open circuit fault detection module increases an error counter C2 by one and determines whether the counter C2 is greater than half of the counter CI. Further, the system has a fault reporting module which detects malfunction in the brake pressure switch based on combination of output of the brake pressure switch open circuit fault detection module and the counter increment block.
An anti-theft casing (70) for key cylinder (20) according to the present invention comprises of a base (80), a void (90) which is defined on the base (80) for the fitment of the key cylinder (20) and a flange (100) extending from the base (80) to cover the key cylinder (20) encompassed in the void (90).
Title of the Invention: A BREAD MOULD DEVICE AND METHOD OF PRODUCING THE BREAD MOULD DEVICE

Abstract:
A bread mould device for baking breads; wherein the bread mould device comprises of one or more bread mould. The bread mould device; wherein the one or more bread pockets are stacked. The bread mould device; wherein the stacking of one or more bread mould results in uniformity of heat distribution. The bread mould device; wherein the stacking of one or more bread pockets is based on space utilization ratio associated with an oven tray surface area and the bread pocket volume. The bread mould device; wherein the space utilization ratio is based on total surface area and bread mould volume. A method of producing a bread mould device wherein the bread mould device comprises one or more bread pockets, the method comprises stacking one or more bread pockets to produce bread mould device.
The present invention relates to methods for development of a polyherbal formulation for strengthening the humoral immunity of goats, particularly pregnant females to counteract the immunosuppressive phase of periparturient period. It also envisages to improve the immune quality of colostrum of such animals by increasing the concentration of immunoglobulin G in the colostrum thereby aiding in passive transfer of immunity to newborn ruminant suckling the dam. The method for formulation intended for pregnant animals consists of dried and powdered Withania somnifera roots, Tinospora cordifolia stem, Asparagus racemosus roots and Punica granatum fruit rind in ratio of 3:3:3:1 (w/w) and fed daily @ 100 mg/kg body weight/day during second half of gestation upto the day of parturition. Dried methanolic extract of the above mentioned formulation when fed to newborn ruminant animals @ 30 mg/kg body weight/day starting from 3rd day of life modulates their immune system in such a way that it does not react in exaggerated way to endotoxin/systemic bacterial infections thereby reducing morbidity and mortality.
The present invention relates to a method of preparation of herbal antistressor for amelioration of thermal stress, which significantly decline the heat shock proteins (HSP 70) and improving the growth in goats. Three plants Acacia nilotica (Var Babool) leaves, Dalbergia sissoo (Var. Shisham) Leaves and Syzygium cumini (Var. Jamun) Leaves were mixed in combination of extracts in 2:1:1 ratio given as oral administration administered at the dose rate of 10 mg/kg body weight daily for 60 days. Similarly, crude powder was given in same ratio as mentioned at point No E and administered at the dose rate of feed mix (@ 5% in concentrate mixture, or equivalent to 5 gram bolus formulation. The physiological responses as Heart rate, Respiration rate and heart rate were optimized. The average daily weight gain was 39.33 gram in the herbal group in comparison to control group of 22 gram. The thermal stress marker HSP 70 was significantly reduced to 71-102 ng/ml in herbal therapy in comparison to control group (180.55 ng/ml). Dated this

No. of Pages: 8  No. of Claims: 6
The present invention relates to a measurement circuit for sensitively and accurately measuring the electrical-parameter (VON+ and VON-) of power semiconductor Device under Test (DUT). The measuring circuit provides on-state voltage sensing, off-state voltage blocking (clamping) and scaling/shifting of sensed voltage required for the purpose of measurement during on-state/off-state of power semiconductor Device under Test.

No. of Pages : 29 No. of Claims : 12
The present disclosure relates to a portable water filtration device (100) comprising a perforated tubular structure (101) wrapped with a composite fabric (113); and the wrapped perforated tubular structure (101) is filled with a first layer (107) of activated carbon sphere and a second layer (109) of activated carbon sphere, a wool filter (111) is placed on the top end of the perforated tubular structure (101) above which a tube (103) for drawing water is placed. The water filtration device (100) of the present disclosure removes dirt and pathogens by nonchemical methods without the requirement of external source of power for drawing potable water. The water filtration device (100) of the present disclosure is cost-effective, has long life and is intended to be used in any geographical conditions or during calamities like heavy inundation.
The invention provides methods, systems and computer program products that enable contactless payment at a point of sale terminal within an electronic payment system that is configured to enable payment card based transactions between a payment transferor and a payment transferee through a trusted intermediary that implements a virtual payment address based payment system. The invention comprises (i) receiving information identifying a virtual payment card associated with a payor™s virtual payment address and a transaction amount, (ii) receiving information identifying an issuer bank associated with said virtual payment card, (iii) receiving the payor™s virtual payment address, and (iv) transmitting to a unified payment interface - the payor™s virtual payment address, a merchant™s virtual payment address, and the transaction amount. The unified payment interface thereafter retrieves payor bank account information, retrieves merchant bank account information, and implements payment of the transaction amount through a settlement platform.

No. of Pages : 55 No. of Claims : 10
Abstract:
The present disclosure provides a load lifting exercise apparatus. The apparatus include a handle for holding during load lifting exercise. An input shaft having one or more first pulleys coupled to the handle for rotating the input shaft as the handle is lowered or raised. An intermediate shaft having a first set of gears configured for selective engagement with the input shaft. An output shaft having a second set of gears configured for selective engagement with the intermediate shaft, and one or more second pulleys coupled to one or more loads to be lifted. The first set of gears and the second set of gears are configured for engagement with the input shaft and the intermediate shaft respectively in a plurality of configurations, each configuration providing a different gear ratio between the intermediate shaft and the output shaft, and wherein effort required to raise or lower the handle is changed by changing the engagement configuration of the second set of gears with the intermediate shaft.
ABSTRACT A vehicle horn control assembly is disclosed. The vehicle horn control assembly (100) includes a microcontroller 105. Further, the assembly (100) includes a first receiver 103a which is configured to receive first radio waves and is in communication with the microcontroller 105. The assembly (100) also includes a first motor (107a) which is in communication with the microcontroller 105 and a first circuit breaker 109a having a first deflecting member being operated by the first motor 107a. A first horn (111a) is coupled to the first circuit breaker 109a. The microcontroller (105) activates the first motor (107a) on reception of the first radio waves. The first motor (107a) pivots the first deflecting member once activated leading to enabling of the first horn (111a).
A method for low complexity detection in a Multiple Input Multiple Output system implementing quadrature amplitude modulation (QAM) so as to reduce complexity in neighbourhood search based detectors. The method computes an initial signal vector (501) being an initial estimate of a transmitted signal vector and constructs a reduced set of neighbours by generating likelihoods (502) of a location in an estimated signal vector being in error and then selecting a set of indices (503) corresponding to a few largest likelihoods. Thereafter, a reduced set of neighbours is generated (504) by updating symbols at the selected set of indices and a candidate signal vector in the neighbourhood (505) is determined. Further, a new initial signal vector, based on minimum likelihood (ML) cost and Euclidean cost, is determined (506, 507). Thus, the present invention lowers the complexity of existing neighbourhood search algorithms by constructing a reduced set of neighbours. Figure 5
Title of the invention: A STRIP FOR MERCURY ION DETECTION

Abstract:
The present invention relates to an on-site detection of mercury ions, particularly simple, fast and inexpensive visible on-site detection of mercury (Hg2+) ions without the requirement of any instrument and observed by naked eyes. The detection is purely colorimetric developed by using disposable cellulose based strips coated with cadmium-chalcogenides quantum dots (QDs) for detection of Hg2+ ions in aqueous medium.

No. of Pages : 14 No. of Claims : 10
Title of the invention: A NEIGHBORHOOD SEARCH BASED LARGE MULTIPLE INPUT MULTIPLE OUTPUT DETECTOR AND A METHOD THEREOF

International classification: H04L0025020000, H04L0025030000, G06K0009000000, H04B0007040000, H04B0007041300

Abstract:
Embodiments disclose a neighborhood search based low complexity detection method for a large Multiple Input Multiple Output, MIMO system and a detector therefor. The detector comprises signal receiving means (401) to intercept a transmitted signal, converter means (402) to convert the received signal to a baseband signal, channel estimating means (403) to estimate channel matrix and signal detecting means (404) configured to generate an initial signal vector and to determine candidate signal vectors iteratively until a candidate signal vector with ML cost more than the ML cost of the initial signal vector is determined. The detector further comprises demodulating means (405) configured to map the symbols to their constituent bits, wherein the converter means (402) is operably coupled to receiving means (401) and channel estimating means (403), and the signal detecting means (404) is operably coupled to the converter means (402), channel estimating means (403) and demodulator means (405). Figure 4

No. of Pages: 31 No. of Claims: 7
The present disclosure provides a method for producing recombinant mature serratiopeptidase in E. coli. The present disclosure also provides a method for purifying the recombinant serratiopeptidase to obtain a purified protein having high yield, activity, and purity.
According to embodiments of the invention, a jack assembly 100 is disclosed. The jack assembly 100 has a base member 102 and a head member 104. The head member 104 is connected to the base member 102 through a plurality of linkages 106. The linkages 106 are connected to a nut and bolt assembly 108, such that head member 104 is moveable in a vertical direction with respect to the base member 102 by operating the nut and bolt assembly 108. One end of the nut and bolt assembly 108 have a first gear wheel 112 with teeth on the outer circumference is attached thereto. The jack assembly 100 further have an arrangement 114 for receiving a removeable second gear wheel 116 with teeth on the outer circumference and having a handle 118 attached thereto. Such the jack assembly 100 may be operated by placing the removeable second gear wheel 116 in the arrangement and operating the handle 118 manually to rotate the second removeable gear wheel 116 that in turn rotate the first gear wheel 112 and varies distance between the head member 104 and the base member 102.
An environment-controlled multi span structured greenhouse comprising a capture blower a release blower equipped with a heating module in cold location and with a cooling module in hot location for relatively free of cost greenhouse supplementary heating and cooling without burning fossil fuel thereby reducing global warming, wherein external surfaces of greenhouse roof and external surfaces of at least one side of the greenhouse comprises a diffused white film at predetermined areas and locations together with fixing a thermal shading film to the surface areas without diffused white film wherein the greenhouse comprises a mechanized module for adjusting the height of artificial light source and a module for sos melting snow anywhere.
The present invention relates to an electricity generating device, comprises of a power supply 2 which generates electricity for house 1, a mud pot containing at least two rods 3, 4 and a copper coil 5, which are connected with a battery 7. The power supply generates electricity from power plants and supplies the electricity to the house. The two rods are copper rod and zinc rod, wherein the copper rod is connected with ground wire. Zinc rod is connected with the copper coil to form a new circuit. An output this new circuit are used as a source of current power supply.
Title of the invention : A CONDENSING DEVICE

Abstract:
The present invention describes a condensing device for removing heat from the hot liquid/gas to convert it into liquid form. The liquid is heated by the heater 1 and converted to vapour form. As it travels 2 through the inner coiled pipe 4, coolant is provided via inlet 5 to the in the outer pipe 3 which flows parallel to the inner pipe 4 containing vapours which are to be cooled, wherein the coolant goes from the chamber 8 and then coolant flows to second pipe 4 and escapes after cooling the vapours via outlet 6. As the vapours travel from the inner pipe 4, they get cooled and then get converted into liquid 7.

No. of Pages : 12 No. of Claims : 8
**Title of the invention**: A HYDROPONIC APPARATUS

**Abstract**

A hydroponic apparatus for maintaining water level is provided. The hydroponic apparatus comprises a reservoir for storing liquid, a first container and a second container. The first container comprises a first inlet, a first outlet, a first sensor and a first valve. The first inlet is coupled to the reservoir. The second container comprises a second inlet, a second outlet, a second sensor and a second valve. The second inlet is coupled to the first outlet and the second outlet is operatively coupled to the reservoir. The hydroponic apparatus comprises a pump means provided at the reservoir and an actuator coupled to the pump means. The actuator actuates the pump means to pump the liquid from the reservoir to the first container via the first inlet, to the second container via the first outlet and the second inlet, and to the reservoir through the second outlet.
Implementations include actions of receiving, by an intelligent quality assurance (iQA) platform, a desired state (DS) file indicating a desired state of a cloud computing environment, triggering, by the iQA platform, an auto-discovery process to provide an actual state of the cloud computing environment based on cloud resources instantiated within the cloud environment, and application resources executing within the cloud environment, the auto-discovery process including retrieving first credentials to enable automated access to the cloud computing environment, determining, by the iQA platform, a delta between the actual state, and the desired state, and providing, by the iQA platform, a report including the delta.
The present subject matter disclosed herein relates to a clutch release bearing assembly (100) for avoiding generation of metal to metal contact noise. The clutch release bearing assembly (100) comprises an inner ring (101) having radially extending flange (101a), an outer ring (102), a plurality of rotating elements (103) disposed in between the inner ring (101) and the outer ring (102). Further a sub-assembly of plastic and rubber (110) is positioned outer peripheral surface of the radially extending flange (101a). The sub-assembly of plastic and rubber (110) is adapted to abut with a diaphragm spring of clutch to make metal and plastic contact at initial stage to avoid metal contact noise. To be published with Fig. 2.
Disclosed is a technology being implemented in an apparatus (100) for coating a substrate (104) with swarf particles (112). The apparatus facilitates depositing metal coating onto metal surfaces, polymers, and ceramics. In this apparatus, the grinding process is retrofitted to deposit coatings onto substrates that range from soft (e.g., polymers and aluminium) to hard (e.g., glass-ceramic) materials. The apparatus (100) comprises a sample holder (102), an infeed (106), and a grinding wheel (110). The sample holder (102) holds a substrate (104) to be coated with swarf particles (112). The infeed holding a work piece (108). The grinding wheel (110) is mounted at a predefined height over the infeed (106). The apparatus (100) is used to perform metal coating by depositing the swarf materials on surface of the substrate (104). It may be noted that the swarf materials are generated by grinding the work piece (108) with the grinding wheel (110).
A variable drive system 200 for driving an AC-compressor in a vehicle is disclosed. The system comprises a planetary gear set with its ring gear 202 coupled to a power source, and sun gear 108 coupled to compressor 212 to supply power to the compressor. A motor-generator 214 is coupled to planetary carrier 206 of the planetary gear set, and adapted to be selectively driven as a motor or a generator at different speeds, and different directions, depending on the input speed of the ring gear 202 and the required speed of compressor 212 for its optimum operation. Motor-generator 214 is located around drive shaft 210 that connects sun gear 208 to compressor 212 to provide a compact arrangement. A brake 216 is provided to arrest running of compressor 212 to enable use of motor-generator 214 for generation of electric power, or for starting the engine, or for boosting output of the engine.
The present disclosure provides a method (100) for replacing a section of conductor in poly phase power transfer line. The method includes a first step of erecting a plurality of fiber reinforced polymer support structure (106). The method includes another step of installing one or more temporary conductors (108) between the plurality of fiber reinforced polymer support structure (106). The method includes yet another step of electrically connecting two ends of the section of conductor of the line needing-replacement with two ends of the one or more temporary conductors (108). The method includes yet another step of diverting current. The method includes yet another step of replacing the section of conductor of the line needing-replacement with a new section of conductor. The method includes yet another step of diverting current flowing through the one or more temporary conductors (108) back to the new section of conductor. To be published with Fig. 1A.
The present disclosure relates to a maximum current configuration for laying four power cables in a trench (102). The maximum current configuration includes a first power cable (104) lying inside the trench (102) substantially parallel to ground surface. The maximum current configuration includes a second power cable (106) lying substantially beneath and substantially parallel to the first power cable (104) inside the trench (102). The maximum current configuration includes a third power cable (108) lying substantially adjacent and substantially parallel to the first power cable (104) inside the trench (102). The maximum current configuration includes a fourth power cable (110) lying substantially beneath and substantially parallel to the third power cable (108) inside the trench (102). The first power cable (104), the second power cable (106), the third power cable (108) and the fourth power cable (110) lie in the trench (102) in a rectangular configuration. 

To be published with Fig. 1
Title of the invention: A METHOD AND SYSTEM FOR SINGLE STAGE SOLAR PV FED WATER PUMPING USING SENSORLESS BLDC MOTOR

Abstract:
Embodiments disclose a system for single stage solar PV fed water pumping using sensorless BLDC motor and a method thereof. The system comprises at least one solar photovoltaic (PV) array (1); a sensorless brushless DC, BLDC, motor (4), driven by the solar PV array; a voltage source inverter, VSI (3) directly coupled to the solar PV array and to the sensorless BLDC motor (4), wherein the VSI (3) is configured to achieve maximum power point of the PV array (1) and to control the BLDC motor drive; and a line voltage sensing means for estimating back EMF™s zero crossings from difference in line voltages between the BLDC (4) motor terminals coupled to the VSI (3).
Electric Shield for Car is an anti-theft car protection system. Nowadays, the cost of cars is more than a built-in house. But these high-cost cars are parked in most of the time in a less secure place. This made the developments in anti-car theft protection universal. In the available theft protection, the intruders easily break the mechanical lock and get inside the car, in the proposed invention, the intruder is stopped at a very initial stage of the theft intention. The proposed invention initiates the theft protection circuit using the RF (Radio Frequency) remote control, after the protection circuit initiation the people very near to the car are warned to stay away from the car using the alarm. The intruder who is in motive to theft car will step ahead of the warning signal and touches the car metallic body will witness an electric shock. If he supposes to break the initial protection of electric shock in the metallic body another protection is made in the steering wheel in the same method of high-voltage electric shock. This arrangement produces two wall protections for the vehicle theft.
Abstract:
In this innovation, we are using a metal strip near side stand of bike & a switch near the meter connection of the bike to intercept the flowing current which gives the initial minimum power (voltage) to start the bike. Normally as the rider kicks of the engine of bike gets initial mechanical & electrical power (torque) to start, but the issue is if the one forgets to uplift the side stand of bike. It is a dual combination presentation of both mechanical & electrical means. It is one of the major problems in a current scenario that a person forgets to uplift the side stand & may unfortunately meet with an accident. It is a innovative concept of implementation of engineering to bikes to completely avoid any chance of an accidents and give a safe ride to a rider.
ABNORMAL RIDING DETECTOR FOR AIR/VACUUM BRAKED RAILWAY VEHICLES

The present invention relates to abnormal riding detector for air/vacuum braked Railway vehicles comprising of pressure chamber inside SPC housing placed between an upper housing and brake pipe connector, wherein the SPC housing is provided with thin diaphragm and bellow so as to maintain a constant low pressure above the atmospheric pressure by means of fluid including air, gas, in which a self un-locking pin is provided with a spring to retain the same in outward position keeping the mass locked when the device is not mounted on the vehicle and the self unlocking pin is pressed inward when the device is mounted on the under-frame of the vehicle thereby unlocking the mass, the pipe connector being connected to brake pipe of the vehicle through an isolating valve. (Fig. 1 and 2)
Disclosed is a shift-lever device for a manual-transmission vehicle equipped with an electronic clutch. In the shift-lever device, a shift lever is configured so as not to be in contact with a sensor, whereby no collision sounds occur due to contact between the shift lever and the sensor. In addition, an accurate sensing value based on the operation of the shift lever is achieved through the use of the maximized radius of rotation of the shift lever, which results in enhanced reliability. In addition, a reduced overall layout, reduced manufacturing costs, and enhanced productivity are achieved due to structural simplification.
The present disclosure relates to a system and method for determining a traffic condition. The systems may perform the methods to:
obtain a length of a road segment, where an upstream intersection and a downstream intersection is linked by the road segment;
determine a first queue length of a queue on the road segment at a first time point and a second queue length of the queue at a second
time point; determine a duration of the second queue length, based on a cycle length of the first traffic light corresponding to the
downstream intersection, a cycle length of the second traffic light corresponding to the upstream intersection, a free-flow speed
corresponding to the road segment, a back-propagation wave speed corresponding to the road segment, and the first queue length; and
determine whether the second queue length exceeds the length of the road segment.
The present invention relates to a wireless communication system. More specifically, the present invention relates to a method and a device for performing a re-establishment of PDCP entity associated with UM RLC entity in wireless communication system, the method comprising: when a re-establishment of a Packet Data Convergence Protocol (PDCP) entity is triggered, stopping and resetting, by the PDCP entity, a reordering timer of the PDCP entity if the reordering timer of the PDCP entity is running; and delivering, by the PDCP entity, all stored PDCP Service Data Unit (SDU) to upper layers in ascending order of associated COUNT values.
A precision shaving razor with low cost assembly. A bridge is unitarily molded having a leading platform, a handle attachment mechanism and first and a second cross member each molded to extend substantially perpendicularly to the leading platform. A plurality of base members is each unitarily molded to have a first peg and a second peg for attachment to the cross pieces. A plurality of blade covers each unitarily molded. A razor blade is sandwiched between each blade cover-base pair. In some instances, the blade covers are molded to have hard stops to facilitate precise blade position. In some cases, the bases define angular wash through channels and blade guards spaced to facilitate wash through. In some cases, the skin contacting surfaces of the razor are textured during molding to have a glide improving texture.
**Title of the invention:** HYDRAULIC STEERING UNIT

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**Abstract:**
A hydraulic steering unit is described comprising a housing (1) and a non-return valve (2) having a ball (3) and a valve seat (4) at an end of a channel (5) in the housing (1), wherein a movement of the ball (3) away from the valve seat (4) is limited by an abutment (7) in the channel (5). Such a steering unit should have a non-return valve which can be produced with low costs. To this end the abutment (7) extends transversely through the channel.

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**Diagram:**

![Diagram of hydraulic steering unit](image.png)

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**No. of Pages:** 11  **No. of Claims:** 10
A spun yarn take-up machine and a yarn threading assisting tool for the spun yarn take-up machine, which prevent an operator from receiving an electric shock when performing yarn threading, are provided. The spun yarn takeup machine includes a conductive frame 92, a ground wire 70, a magnet 71 which conductively attaches the ground wire 70 to the frame 92, and a hook member 72 which conductively attaches the ground wire 70 to a yarn threading assisting tool 60.
Heat transfer devices, electronic devices, and methods for heat transfer with an external body. Heat transfer devices include a first disc, a second disc positioned adjacent to the first disc, and at least one spacer positioned between the first disc and the second disc. The first disc defines an aperture and comprises a pin cooling structure extending from around the aperture. The pin cooling structure comprises a distal end configured to facilitate heat exchange between the pin cooling structure and an external/adjacent/separate body and one or more side walls. At least one of the one or more side walls, the distal end, and the aperture at least partially define a pin volume. The second disc defines an inlet that is configured to (i) receive a fluid, and (ii) allow the fluid to flow from the inlet and into the pin volume.

No. of Pages : 37 No. of Claims : 15
Title of the invention: ELECTROMAGNETIC-WAVE-ABSORBING COMPOSITE SHEET

Abstract:
An electromagnetic-wave-absorbing composite sheet comprising an electromagnetic-wave-absorbing magnetic film, and an electromagnetic-wave-shielding film laminated on the electromagnetic-wave-absorbing magnetic film; the electromagnetic-wave-absorbing magnetic film comprising magnetic powder uniformly dispersed in a binder resin; the electromagnetic-wave-shielding film being a conductive metal foil, a plastic film having a thin conductive metal film or coating, or a carbon sheet; and an area ratio of the electromagnetic-wave-shielding film to the electromagnetic-wave-absorbing magnetic film being 10-80%.

No. of Pages: 31 No. of Claims: 4
A knee bolster for vehicle is constituted by an upper member (3) and a lower member (4) each extending toward a vehicle rear from a steering support member (2), a front end portion of either one of the members (3) and (4) is joined to the steering support member (2), the upper member (3) has an upper base portion (30a) and an upper rear portion (30b), and a rear-end surface portion (30c), and the lower member (4) has a lower base portion (40a) and a lower rear portion (40b), and the rear-end surface portion (30c) of the upper member (3) and the rear end portion of the rear portion of the lower member (4) are joined to each other.
A control system includes an electronic control unit (61) including a feedback controller (82) and a reference governor (84). The feedback controller (82) is configured to determine a value of control input such that a value of control output approximates a target value. The reference governor (84) is configured to calculate, with a prediction model, a predicted maximum value of an overshoot amount of the control output that overshoots from the target value. The prediction model is derived assuming that an n-th delay (n is a natural number) occurs in a response of the control output. The reference governor (84) is configured to calculate the target value by correcting the provisional target value of the control output based on the predicted maximum value so as to increase a degree of satisfaction of a constraint condition with regard to the control output.
The invention relates to a method for operating a textile machine (1), in particular a textile machine (1) producing cross-wound bobbins, most particularly an open-end spinning machine, comprising a plurality of identical workstations (2), wherein, during a normal operation of the workstations (2), yarn is produced or rewound from a supply bobbin onto a receiving bobbin with the aid of the workstations (2), and wherein a plurality of workstations (2), after a stoppage of these workstations (2), is started and therefore, set into the normal operating mode. According to the invention, it is provided that the plurality of workstations (2) is divided into groups (7) of workstations (2) and the groups (7) of workstations (2) are started at different times. Moreover, the invention relates to a textile machine (1), in particular a textile machine (1) producing cross-wound bobbins, most particularly an open-end spinning machine, comprising a plurality of identical workstations (2) for producing yarn or for rewinding yarn from a supply bobbin onto a receiving bobbin, wherein the textile machine (1) comprises control means or is operatively connected to control means, which are designed for operating the textile machine (1) according to the preceding description.
Abstract:
Managing redundant multi-channel interactions in a contact center includes determining that the contact center has received a first contact and a second contact via respective channels, the second contact being received while the first contact is ongoing. Managing also includes identifying that the first contact and the second contact are redundant and inquiring of the customer as to whether to proceed with the first contact or the second contact. In response to the inquiry, receiving a response from the customer. Furthermore continuing with one of the first contact or the second contact based on the response, each of the first contact and the second contact associated with a respective wait queue; and routing the one of the first contact or the second contact to a device associated with an agent of the contact center, when the one of the first contact or the second contact reaches a top of its associated wait queue.
A method for facilitating transactions is provided. Various users register their payment modes to avail a payment mode interchange service offered by a server for online purchases. During registration, the users specify corresponding offer amounts in exchange for allowing purchases of other users to be performed by using their payment modes. When an offer on a purchase is not applicable on a payment mode of a first user, the first user is recommended by the server to make the purchase by using a payment mode of a second user on which the offer is applicable. The payment mode of the second user is charged with a purchase amount of the purchase and the offer amount specified by the second user is billed on the payment mode of the first user. The second user receives the offer amount and the first user receives an incentive associated with the offer.
## Patent Information

**Title of the invention:** DYNAMIC SYNCHRONIZATION OF CO-EXISTING MULTICHLANEL INTERACTIONS IN A CONTACT CENTER

**Abstract:**
Managing redundant multi-channel interactions in a contact center includes determining that the contact center has received a first contact and a second contact via respective channels, the second contact being received while the first contact is on-going. Managing also includes identifying that the first contact and the second contact are redundant or relate to an unknown topic and inquiring of the customer as to whether to proceed with either one or both of the first contact or the second contact. Furthermore, continuing with at least one of the first contact or the second contact is performed based on the response, each of the first contact and the second contact associated with a respective wait queue. Then one or both of the contacts can be assigned to an agent.
An array substrate is provided. The array substrate includes a first base material, and a display circuit layer and a recognition circuit layer laminated on the first base material. The display circuit layer includes multiple gate lines, multiple data lines, and multiple thin-film transistors (TFT). Projections of the multiple gate lines on the first base material and projections of the multiple data lines on the first base material define multiple sub-pixel projection areas. Each of projections of the multiple TFTs on the first base material falls into a corresponding area of the multiple sub-pixel projection areas. The recognition circuit layer includes multiple photoelectric sensors. Projections of the multiple photoelectric sensors on the first base material fall into different areas of the sub-pixel projection areas. The photoelectric sensor is configured to sense target lights carrying user fingerprint information. A display screen and an electronic device are further provided.
Title of the invention: HYDRAULIC TENSIONER EXPANDABLE CLIP LOCK

A clip lock for securing an expandable clip of a chain tensioner includes an elongated member having a first surface configured to engage an exterior surface of the chain tensioner and a second surface, spaced apart from the first surface, that is configured to engage the expandable clip and maintain the expandable clip in contact with an annular groove of a chain tensioner component preventing radially-outward expansion and axial movement of the expandable clip with respect to the chain tensioner component while the first surface engages that exterior surface of the hydraulic tensioner and the second surface engages the expandable clip.
A hybrid electrodynamic levitation system that utilizes both superconducting and conductive tracks. The hybrid system reduces the overall drag induced upon the system and reduces the amount of power required to achieve operating speeds, while resolving the issue of requiring velocity relative to the track for levitation. The total initial and operating costs of the hybrid system can be lower than utilizing a superconductive or conductive track alone, while still enabling a fail-safe levitation system for high speed transportation.
An inductive-humidification and evaporative-cooling ventilation system comprising: means for generating a flow of air; a channel (10) for conveying said flow of air, said channel (10) comprising a plurality of inductive holes (11) for transferring said flow of air into the environment, said channel (10) further comprising at least one outflow mouth (17) for expelling said flow of air, which has a three-dimensional structure open both at the back and at the front, and a fluid-thread straightener (21) set at the rear end of said at least one outflow mouth (17), which recalls a flow of air (31) from the environment surrounding said channel (10); and at least one humidification device (16) for introducing nebulised water into the environment; wherein said at least one humidification device (16) is set within said at least one diffusion mouth (17), and said plurality of holes (11) are arranged in a number of rows (12) aligned longitudinally along the ducts (10).
A main object of the present disclosure is to provide an all solid state battery of which volume change due to charge and discharge is reduced. The present disclosure achieves the object by providing an all solid state battery characterized by comprising a cathode layer, an anode layer, and a solid electrolyte layer formed between the cathode layer and the anode layer, wherein the anode layer contains a Si-based active material of which average particle size is less than 2.6 μm, and a first solid electrolyte.
Title of the invention: TISSUE RESECTION APPARATUS

Abstract:
A tissue resection apparatus is provided which includes an outer tube with a helical coil disposed on a distal end. The coil is provided with a first electrode. A central tube has a distal edge profile comprising one or more surface segments. One of the surface segments includes a second electrode. The central tube is slidably disposed within the outer tube and positioned such that second electrode opposes at least a portion of the first electrode. A cutting tube is slidably disposed within the central tube and includes a cutting edge.
A method for removing a tissue lesion where an anchor is established with the lesion. A channel is created in the tissue leading to the anchored lesion. A tissue core is created which includes the lesion. The tissue core is ligated, amputated and removed from the channel.
Title of the invention: A KIT FOR REMOVING A TISSUE LESION

Abstract:
A kit for removing a tissue lesion includes an anchor for securing a tissue lesion, incision blades for creating an incision in tissue, a tissue resection device for creating a tissue core that includes the tissue lesion and a tissue dilator to help open a channel of sufficient volume to receive the tissue resection device. The tissue resection penetrates tissue, creates a tissue core that includes the tissue lesion and seals and dissects the tissue lesion from surrounding tissue.
The invention relates to a sliver can (1) for accommodating a strand-shaped fiber material (2), comprising a peripheral, at least partially transparent side wall (3), via which an accommodating space (4) for the fiber material (2) is delimited, comprising a can base (5), which is preferably vertically movable within the accommodating space (4), and comprising at least one display element (6) for displaying the quantity and/or at least one property of the fiber material (2) located in the sliver can (1). According to the invention, the display element (6) is arranged in such a way that it is visible through the side wall (3) from outside the accommodating space (4).

No. of Pages : 25 No. of Claims : 15
Title of the invention: DISPLAY DEVICE HAVING AN OPTICAL SENSOR

A display device includes a display panel having a display area and a non-display area at least partially surrounding the display area. A panel support sheet is disposed behind the display panel and has a first hole exposing the display area of the display panel. An optical sensor is disposed within the first hole. A first light-blocking portion is disposed in a void area that is between the panel support sheet and the optical sensor, within the first hole.
A steam valve (10) includes a housing (12) defining a steam inlet (14) and a steam outlet (16) in fluid communication with a valve cavity, and an annular valve seat disposed within the valve cavity. A control valve (17) is configured to selectively engage the valve seat (21). The steam valve (10) further includes a stop valve (19) configured to selectively engage the valve seat (21). The steam valve (10) includes a pressure seal head (100) configured to receive the stop valve (19). The pressure seal head (100) includes an elongated body (102) having a bore (106) extending longitudinally through the elongated body (102); and a nose piece (104) extending from an end of the elongated body (102). The nose piece (104) has at least a tapered end portion (122) and a bore (128) extending longitudinally therethrough. The bore (128) of the nose piece (104) is longitudinally aligned with the bore (106) of the elongated body (102). The nose piece (104) is formed of a first material which has greater erosion resistance properties than a second material forming the elongated body (102).
Abstract:
A touch sensor assembly (100) may include a touch substrate (120) that is attached to a rear of a front panel (20) on which touch points (21) are displayed, a piezo disc (130) in which a first pole (136) and a second pole (138) are stacked, wherein the first pole (136) faces the touch substrate (120) to contact a rear of the touch substrate (120); a holder (140) that is configured to support a lateral surface and a rear of the piezo disc (130) to fix the piezo disc (130) to the rear of the touch substrate (120), and a cover (200) that has a front surface which adheres to the rear of the touch substrate (120) and that includes a concave chamber which is overlapped with the holder (140). A refrigerator door may include the touch sensor assembly (100).
(51) Title of the invention : POWER SUPPLY DEVICE OF VEHICLE

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<td>(57) Abstract : There is provided a power supply device of a vehicle. The power supply device is configured to convert rotational energy of a wheel into electric power to perform regenerative charge of a battery. The battery includes a first battery and a second battery which has an internal resistance larger than that of the first battery. The power supply device comprises a charge branch unit which branches an object of the regenerative charge to the first battery and the second battery. When the first battery is being charged at a first voltage, once the first battery reaches a first charge amount, a charge voltage is gradually changed from the first voltage to a second voltage which is lower than the first voltage by changing a power generation amount of the electric motor. Once the first battery reaches a second charge amount, the second battery is charged at the second voltage via the charge branch unit.</td>
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No. of Pages : 18 No. of Claims : 5
A locomotive propulsion system onboard a locomotive platform includes a traction motor, a propulsion electrical storage device, an ancillary electrical storage device, and a controller. The propulsion electrical storage device is electrically connected to the traction motor via a propulsion circuit, and the ancillary electrical storage device is electrically connected to the traction motor via an ancillary circuit. The controller is configured to direct the ancillary electrical storage device to supply electric current to the traction motor via the ancillary circuit to power the traction motor during an elevated demand period. At an end of the elevated demand period, the controller is configured to control the ancillary circuit to stop conducting electric current from the ancillary electrical storage device and to direct the propulsion electrical storage device to supply electric current to the traction motor via the propulsion circuit to power the traction motor.
Provided are a method for call processing and an electronic device. The method includes the following. Voice data collected by at least two target wireless headphones of the multiple target wireless headphones are received respectively. The multiple target wireless headphones are coupled with an electronic device, and the electronic device is in a call mode. The voice data collected by the at least two target wireless headphones is sent to the other party of a call. Audio data is received from the other party and the audio data is sent to the multiple target wireless headphones respectively. As such, a group call with the other party can be realized through the multiple target wireless headphones and the electronic device, which improves user experience.
A camera calibration method, a camera calibration apparatus (300), an electronic device and a computer-readable storage medium are provided. The camera calibration method includes the following steps. At (202), a target infrared image and a Red/Green/Blue (RGB) image obtained by capturing the same scene by an infrared camera and an RGB camera are acquired when the image definition is lower than a definition threshold. At (204), feature points in the target infrared image are extracted to obtain a first feature point set, feature points in the RGB image are extracted to obtain a second feature point set, and the first feature point set and the second feature point set are subjected to matching. At (206), a transformation relation between a coordinate system of the infrared camera and a coordinate system of the RGB camera is acquired according to the matched feature points.
A low refractive layer includes a plurality of hollow inorganic particles and a matrix between the hollow inorganic particles, and capable of exhibiting a good refractive index and improved durability by enhancing the weight ratio of the hollow inorganic particles to the matrix. An electronic device according to an embodiment of the inventive concept including the low refractive layer may exhibit improved reliability and good display quality.
A fitting assembly includes a tube, a fitting body, a threaded drive nut, and at least one ferrule. An engagement indicator member is adapted to engage a corresponding engagement indicator member for indicating a correct installation of the fitting assembly, the engagement indicator member having a body having a geometry adapted to be rotatably received or non-rotatably received by one of the fitting body or the drive nut.
The invention relates to a moulding system (100) comprising a structure (102), a fixed mould (104) fixed to the structure (102), a first mobile mould (106) mounted with translational mobility on the structure (102) between an open position in which the first mobile mould (106) is away from the fixed mould (104) and a closed position in which the first mobile (106) is against the fixed mould (104), and a monitoring system (150) which comprises: - a first reference surface (152) solidly fixed to the fixed mould (104) and parallel to the direction of translational movement (50) of the first mobile mould (106), - a first sensor (154) solidly fixed to the first mobile mould (106) which comes to bear against the first reference surface (152) and is configured to measure a first distance perpendicular to the first reference surface (152), and - a control unit (156) which is connected to the first sensor (154) and which is configured to detect a deviation in the first distance measured by the first sensor (154) with respect to a first tolerance band. Fig. 1
A method and apparatus are disclosed. In an example from the perspective of a User Equipment (UE), if sidelink packet duplication is configured or enabled for a Sidelink Radio Bearer (SLRB), a first Packet Data Convergence Protocol (PDCP) Protocol Data Unit (PDU), corresponding to a first PDCP Service Data Unit (SDU), and a duplicate of the first PDCP PDU, are transmitted. A first PDCP Sequence Number (SN) of the first PDCP PDU is set based upon one or more state variables used for sidelink transmission on the SLRB. If the sidelink packet duplication is de-configured or disabled for the SLRB, a second PDCP PDU, corresponding to a second PDCP SDU, is transmitted. No duplicate of the second PDCP PDU is transmitted. A second PDCP SN of the second PDCP PDU is set based upon the one or more state variables used for sidelink transmission on the SLRB.
The invention concerns a rotor (100) for a synchronous generator having a plurality of salient poles (200) regularly disposed on the outer periphery of a rim (300), each pole comprising a coil with two external terminals said, respectively, first terminal (201) and second terminal (202), the poles being arranged so that two adjacent poles have either their respective first terminals (201) or their respective second terminals (202) facing each other, the rotor further comprising at least a first connection (401) between first terminals (201) and/or at least a second connection (402) between second terminals, the rotor being characterized in that the first connection (401) and the second connection (402) comprises a plurality of elongated conductive plates whose each ends (A, B) are secured via a single securing mean on facing terminals. Figure 3.
An image processing method, an image processing apparatus (700), an electronic device (10) and a computer-readable storage medium are provided.

The image processing method includes: a temperature of a light emitter is detected (202); in condition that a temperature difference between a present temperature of the light emitter and an initial temperature exceeds a threshold, a target parameter is acquired (204); and a predetermined operation is performed according to the target parameter (206).
A textile apparatus (4) comprising at least one spinning unit (8), adapted to produce yarn and wrapping it around a tube (12), so as to form a bobbin (16), at least one tray (20) for containing bobbins (16) and tubes (12), wherein the tray (20) comprises a plurality of plates (24) adapted to each support a bobbin (16) or a tube (12), said plates (24) being guided and moved within grooves (28) delimiting predefined paths within the tray (20), the tray (20) being configured to receive bobbins (16) from the spinning unit (8) and to send tubes (12) to the spinning unit (8) and vice versa. Fig. 1
Abstract:
A method and a device for processing an image, an electronic device (200) and a computer readable storage medium are provided. The method includes the following. An image capturing instruction is obtained. An infrared image and an RGB (Red-Green-Blue) image are acquired based on the image capturing instruction. A first feature of the infrared image and a second feature of the RGB image are extracted. An alignment operation is performed based on the first feature and the second feature.

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Title of the Invention: METHOD AND DEVICE FOR PROCESSING IMAGE, AND ELECTRONIC DEVICE
Title of the invention: POWER GENERATION CONTROL SYSTEM

Abstract:
To provide a power generation control system that reliably prevents damage to its switch and improves charging responsiveness of its storage battery. A power generation control system 5 having a control function 48 of opening and closing each of a first switch 41 and a second switch 42 and a determination function 49 of permitting the second switch 42 to switch from an open state to a closed state based on current flowing through the first switch 41. The control function 48 is allowed to close the second switch 42 when the determination function 49 permits the second switch 42 to switch from the open state to the closed state. A MG controller 32 that increases the output voltage of a generator 3 to a first output voltage when the determination function 49 permits the second switch 42 to switch from the open state to the closed state, and further increases the output voltage of the generator 3 to a second output voltage larger than the first output voltage when the control function 48 completes closing the second switch 42.

[Fig.2]
INTERNAL BOX FLOW DEFLECTOR FOR A VEHICLE EXHAUST SYSTEM MIXER ASSEMBLY

A mixer includes a baffle having a baffle inlet receiving exhaust gas from an upstream exhaust component and a baffle outlet directing exhaust gas to a downstream exhaust component. A cover provides a chamber between an internal surface of the cover and the baffle. An internal box is positioned within the chamber to cover the baffle outlet and includes a bottom wall with a peripheral wall extending about at least a portion of an outer periphery of the bottom wall. At least one deflector wall is positioned within the internal box to provide a wall surface that is spaced from the peripheral wall to define an internal flow path that diverts exhaust gas at least partially around the baffle outlet before exiting the baffle outlet. An opening is located in the peripheral wall to receive exhaust gas exiting the inlet and to direct exhaust gas into the internal flow path.
A display screen (10) and an electronic device (100) are provided. The display screen (10) includes a number of display pixels (11) arranged on a display area (101) of the display screen (10) and a plurality of image capturing pixels (21) arranged in gaps between the plurality of display pixels (11). The display screen (10) is operable in a display mode or an image capturing mode. The plurality of display pixels (11) is switched on when the display screen (10) is in the display mode and the plurality of image capturing pixels (21) is switched on when the display screen (10) is in the image capturing mode. The display screen (10) integrates display pixels (11) and image capturing pixels (21), so the display screen (10) may be used for display and image capturing at the same time.
Title of the invention: **REFRIGERATOR**

Abstract:
A refrigerator having a freezer compartment and a refrigerator compartment, the refrigerator including an icemaker provided at the freezer compartment door configured to open/close the freezer compartment, a dispenser provided at a refrigerator compartment door configured to open/close the refrigerator compartment, and a water tank provided at the refrigerator compartment door, the water tank having an inlet through which water is introduced into the water tank, a first outlet for supplying water to the dispenser, and a second outlet for supplying water to a pump, wherein the pump is configured to pump water from the water tank to the icemaker.

No. of Pages: 40  No. of Claims: 20
Title of the invention: REFRIGERATOR

Abstract:
Disclosed is a refrigerator. The present invention provides a refrigerator having a freezer compartment and a refrigerator compartment, the refrigerator including an icemaker provided to the freezer compartment or a freezer compartment door configured to open/close the freezer compartment, a dispenser provided to a refrigerator compartment door configured to open/close the refrigerator compartment, a water tank provided to the refrigerator compartment door, the water tank having an inlet for putting in water and an outlet for supplying water to the dispenser, a pump configured to send the water supplied from the water tank to the icemaker, and a slide cap movably provided to the water tank so as to be selectively coupled to a passage connected to the pump.

No. of Pages: 32 No. of Claims: 20
Title of the invention: FLEXIBLE, LINEAR, ELECTRIC ACTUATOR FOR AUTOMOTIVE APPLICATIONS

Abstract:
Actuator (4) for automotive applications, comprising: - a main body (8) housing motor means (12), transmission means (16), a control shaft (20), kinematically connected to said motor means (12) by means of said transmission means (16), - wherein the control shaft (20) extends from a first transmission end (24), connected to the transmission means (16), to a second operating end (28) operatively connected to a user device. The control shaft (20) is controlled in a reciprocating linear motion along an axial direction (Y-Y) by means of said transmission means (16) which transform a rotation movement along a drive axis (X-X) of the motor means (12) into a translation movement of the control shaft (20) along said axial direction (Y-Y); the motor means (12) and the control shaft (20) are oriented so that the drive axis (X-X) and the axial direction (Y-Y) are perpendicular or parallel and spaced apart from each other.
The invention relates to a method for tuning a fleece nozzle (1) to a sliver (2) disposed at a discharge of a drafting system (3) of a textile machine. According to the invention, the fleece nozzle (1) is selected from a plurality of different fleece nozzles (1) depending on at least one sliver property of the sliver (2) and an orientation and/or position of the fleece nozzle to the sliver is adjusted depending on the sliver properties. The invention further relates to a drafting system of a textile machine for drafting at least one sliver (2) and having a fleece nozzle (1) for consolidating the sliver (2) disposed at the discharge of the drafting system (3).
A system (100) for health and fertility management of milch animals (105), comprises devices worn by the milch animals (105n), each of the devices (110n) comprises sensors configured to detect a values indicative of a parameters and a microprocessor unit (114) in communication with the sensors, configured to receive and process the values to determine the parameters and a central computing device (120), in communication with the microprocessor unit (114) and a user device (124), configured to receive the parameters from the devices (110n) on real time basis, compare the parameters with a predetermined reference data corresponding to respective conditions and determine conditions of the milch animals (105) on the basis of the received parameters. Further, the central computing device (120) is further configured to generate and send a first notification, indicative of the one or more conditions of the milch animals (105n), to the user device (124).
The present disclosure provides a control method. The method is applied to an imaging device including a pixel unit array composed of a plurality of photosensitive pixels, and the method includes: controlling the pixel unit array to measure ambient brightness values; determining whether a current scene is a backlight scene according to the measured ambient brightness values; when the current scene is a backlight scene, determining the ambient brightness value of a region in the pixel unit array according to the ambient brightness values measured by the photosensitive pixels, in which the region includes at least one photosensitive pixel; and controlling the photosensitive pixels in the region to shoot in a corresponding shooting mode, according to the ambient brightness value of the region and a stability of an imaging object in the region. A control apparatus, an imaging device and an electronic device are also provided.
Title of the invention: DATA DRIVER CIRCUIT, CONTROLLER, DISPLAY DEVICE, AND METHOD OF DRIVING THE SAME

Abstract:
A data driver circuit (120), a controller (2210), a display device (100), and a method of driving the same. Overlap driving of overlapping subpixels and fake data insertion driving of inserting a fake image, different from real images, into each of a plurality of lines are performed in a combined manner. Image quality is improved, despite of combined driving.

No. of Pages: 110 No. of Claims: 17
A clamp (1) for a wire (6) of an overhead line comprising a main body (2) having a groove (4) for hosting the wire (6), a first and a second tapered region (12a, 12b) located in respective ends of the groove (4), a first and a second spring (10a, 10b) placed in respective holes on opposite sides of the groove (4), located in a central portion of the groove (4) and arranged for pushing respective wedge elements (8a, 8b) into the tapered regions (12a, 12b) in opposite directions (A, B), said wedge elements (8a, 8b) being arranged for tightening the wire (6) by blocking between the wire (6) itself and a wall of the respective first and second tapered region (12a, 12b).
A fiber reinforced polymer material cover for an utility pit comprising: a substantially flat upper surface; a bottom surface having an outer perimeter rim with a recessed interior cavity; at least one continuous support rib extending through the recessed interior cavity from opposite sides of the outer perimeter rim to transfer load placed on the cover and minimize deflection under the load to the outer perimeter rim.
The Patent Office Journal No. 06/2020 Dated 07/02/2020

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(54) Title of the invention : GLASS PLATE SPLITTING MACHINE

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    Filing Date : 31/07/2018
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(61) Patent of Addition to Application Number : NA
    Filing Date : NA
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    Filing Date : NA

(57) Abstract:
A glass plate splitting machine 1 is provided with a flexible endless belt 3, a supporting member 4 for supporting the endless belt 3, two glass plate receiving devices 7, 7a having glass plate receiving surfaces 6, 6a, movement devices 8, 8a for causing the glass plate receiving devices 7, 7a, respectively, to move in an X-direction and a Y-direction orthogonal to the X-direction, two push-cracking devices 9, 9a, and movement devices 10, 10a for causing the push-cracking devices 9, 9a, respectively, to move in the X-direction and the Y-direction orthogonal to the X-direction.

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No. of Pages : 29
No. of Claims : 4
In this cutting insert, surfaces involved in cutting are formed from a cBN-based sintered body, ceramic or cermet, and the cutting insert includes a rake face, a flank, a chamfer disposed between the rake face and the flank, and a cutting edge formed from a ridge line in a position in which the flank and the chamfer intersect, wherein the cutting edge includes a push-processing cutting edge portion, a pull-processing cutting edge portion, and a connecting cutting edge portion disposed between the push-processing cutting edge portion and the pull-processing cutting edge portion, and the width of the chamfer disposed along the connecting cutting edge portion is the smallest of the chamfers disposed along the cutting edge.
Provided in the present specification is a method for performing a narrowband physical uplink shared channel (NPUSCH) transmission. The method can comprise the steps of: determining a starting position of NPUSCH transmission; performing the NPUSCH transmission when the determined starting position of the NPUSCH transmission is determined to be the first between two continuous subframes; and delaying the NPUSCH transmission when the determined starting position of the NPUSCH transmission is determined to be the second between the two continuous subframes. The two continuous subframes can be set as time division duplex (TDD) uplink subframes based on either TDD setting 1 or 4. The two continuous subframes can be defined for subcarrier spacing of 3.75 kHz.
A light-emitting diode according to one embodiment comprises a first conductive type semiconductor layer and a mesa disposed on the first conductive type semiconductor layer wherein the mesa includes: a semiconductor laminate including an active layer and a second conductive type semiconductor layer; a ZnO layer located on the second conductive type semiconductor layer; a lower insulation layer covering the ZnO layer and the mesa and having an opening that exposes the ZnO layer; a first pad metal layer disposed on the lower insulation layer and electrically connected to the first conductive type semiconductor layer; a second pad metal layer electrically connected to the ZnO layer through the opening of the lower insulation layer and spaced apart from the first pad metal layer in a horizontal direction; and an upper insulation layer covering the first pad metal layer and the second pad metal layer and having a first opening and a second opening which expose the first pad metal layer and the second pad metal layer respectively wherein the ZnO layer below the opening of the lower insulation layer has a thickness thinner than that of the ZnO layer covered with the lower insulation layer.

No. of Pages : 36 No. of Claims : 27
Provided in an embodiment of the present invention are a method and device enabling a network side device to identify and control a remote user equipment unit. The method comprises: a session management device receiving an identifier of a remote user equipment unit generating on the basis of the identifier a policy associated with the remote user equipment unit and comprising the identifier of the remote user equipment unit and transmitting the policy to a user plane function device; and the user plane function device identifying on the basis of the policy a data packet of the remote user equipment unit and performing on the basis of the policy control on the remote user equipment unit. The method enables a network side device to grant a service access by a remote user equipment unit and perform service management and policy control with respect to the remote user equipment unit.
Provided by the present application are a data transmission method network device and terminal device. The method comprises: a network device generating first information a value of a bit comprised in the first information being used to indicate a demodulation reference symbol (DMRS) port combination in a second set each DMRS port combination in the second set belonging to a first set the first set comprising multiple DMRS port combinations the DMRS port combinations comprising at least one DMRS port and the number of DMRS port combinations comprised in the second set being less than the number of DMRS port combinations comprised in the first set; and the network device sending the first information to a terminal device. The embodiments of the present application may reduce signaling overhead.
Title of the invention: METHOD FOR FORMING LITHIUM METAL AND INORGANIC MATERIAL COMPOSITE THIN FILM AND METHOD FOR PRE-LITHIATION OF NEGATIVE ELECTRODE FOR LITHIUM SECONDARY BATTERY BY USING SAME

Abstract:
The present invention relates to a method for pre-lithiation of a negative electrode the method comprising: a first step for introducing an inorganic material powder into molten lithium to form a mixture; a second step for extruding and cooling the mixture thereby preparing a lithium metal-inorganic material composite ribbon with a thickness of 100-200; a third step for rolling the lithium metal-inorganic material composite ribbon to prepare a lithium metal-inorganic material composite thin film; and a fourth step for placing the lithium metal-inorganic material composite thin film on a surface of a negative electrode to form a lithium metal-inorganic material composite layer. In the present invention the lithium metal-inorganic material composite thin film is joined to the negative electrode thereby minimizing the exposure time of lithium to the air and therefore the present invention has an effect of solving a problem of the deterioration of lithium during application of a mixture slurry due to high reactivity of the lithium metal in the application of a conventional lithium metal-inorganic material mixture. A negative electrode for a secondary battery manufactured by the method for pre-lithiation provided in the present invention has improved initial irreversibility and a secondary battery manufactured using such a negative electrode for a secondary battery has excellent charging and discharging efficiency.
The present invention discloses an electronic cooling anti-condensation system, and an anti-condensation method for the same. The system comprises a testing chamber, electronic cooling plates, temperature sensors, a temperature and humidity sensor, a cooling plate control unit, and a main controller. The main controller is electrically connected to the temperature sensors, the temperature and humidity sensor, and the cooling plate control unit. The main controller is capable of calculating a dew point value of the air in the testing chamber according to an internal temperature value and a humidity value of the testing chamber acquired by the temperature and humidity sensor. If the dew point value of the air is greater than a pre-determined threshold, the cooling plate control unit is controlled to reduce the number of operating electronic cooling plates or an output power of the electronic cooling plates, wherein the pre-determined threshold is a temperature T1 or a temperature of the electronic cooling plates T1 + n°C, where n ≤ 10. The invention achieves real-time control of operation states of the electronic cooling plates, thereby realizing redundant control of the cooling plates, and preventing the cooling plates from causing condensation in the chamber body, so as to achieve continuous operation when a failure occurs.
The present invention provides engineered antibodies and antigen binding fragments, in which an additional functional domain is inserted into the elbow region of the antibody or antigen binding fragment. The present invention also provides nucleic acid molecules, such as vectors, encoding such antibodies and antigen binding fragments, host cells and compositions comprising such antibodies, antigen binding fragments or nucleic acid molecules and uses thereof. For example a multispecific antibody format is provided, in which an additional binding site (specificity) is inserted into the elbow region of an antibody or antigen binding fragment.
Zinc oxide-based sorbents, and processes for preparing and using them are provided, wherein the sorbents are preferably used to remove one or more reduced sulfur species from gas streams. The sorbents contain an active zinc component, optionally in combination with one or more promoter components and/or one or more substantially inert components. The active zinc component is a two-phase material, consisting essentially of a zinc oxide (ZnO) phase and a zinc aluminate (ZnAl2O4) phase. Each of the two phases is characterized by a relatively small crystallite size of typically less than about 50 nm (500 Angstroms). Preferably the sorbents are prepared by using an alkali metal base to convert a precursor mixture, containing a precipitated zinc oxide precursor and a precipitated aluminum oxide precursor, to the two-phase, active zinc oxide containing component, with the resulting sorbent having a sodium level within a desired range.
Methods and systems of producing chemical feedstocks from crude oil can include: introducing a fraction of crude oil into a catalytic hydrovisbreaker reactor, wherein the crude oil fraction is dealkylated after introduction; introducing a product stream from the catalytic hydrovisbreaker reactor and a solvent into a solvent deasphalter unit; and introducing deasphalted oil from the unit into a two-stage hydrocracker to produce the chemical feedstocks. The crude oil fraction can be atmospheric residue or vacuum residue. The chemical feedstocks can include C3-gases, C4-C5 gases, naphtha, BTX, and gas oil. The chemical feedstocks can be used to produce olefins and polymers.
The present application relates to a resource allocation method, a network device and a terminal device. The method comprises: a network device allocates a plurality of receiving resource pools corresponding to different synchronisation reference sources for a terminal device; the plurality of receiving resource pools being used for the terminal device to receive data sent by another terminal device; the network device determines at least one receiving resource pool from among the plurality of receiving resource pools; the network device configures the plurality of receiving resource pools for the terminal device, determines the at least one receiving resource pool from among the plurality of receiving resource pools, and indicates the at least one receiving resource pool via the SIB, so as to avoid SIB size limitation, and thereby implement flexible receiving resource pool configuration.
A composition useful for subterranean water or gas shut off applications includes organosilane-modified colloidal silica and an accelerator. The accelerator includes one or more organic or inorganic salts. A method of using a composition, including an organosilane-modified colloidal silica and an accelerator, includes forming a fluid system that is flowed to a formation in a subterranean zone, such as through a wellbore, where the composition forms a gel to plug the formation and shut off water flow into the wellbore.
Systems, methods, and compositions provided herein relate to preparation of beads encapsulating genetic material. Some embodiments include preparation of nucleic acid libraries within the bead, wherein the bead includes pores that allow diffusion of reagents while retaining genetic material.
A fractionation system for removing heavy hydrocarbons in a gas stream. A stripping section receives a predominantly liquid phase of the feed gas stream. A co-current contacting system receives a predominantly vapor phase of the feed gas stream. The co-current contacting system includes a compact contacting bundle disposed within a vessel and including a plurality of substantially parallel contacting units, each of the plurality of contacting units having a droplet generator, a mass transfer section, and a separation system. Each droplet generator generates droplets from a liquid disperses the droplets into a gas stream. Each mass transfer section provides a mixed, two-phase flow having a vapor phase and a liquid phase. Each separation system separates the vapor phase from the liquid phase such that the concentration of heavy hydrocarbons in the vapor phase is lower than in the liquid phase.
A fractionation system (400) for removing heavy hydrocarbons in a gas stream. A stripping section (402) receives a predominantly liquid phase of a feed gas stream. First and second co-current contacting systems (421a and 421b) are located in-line within a pipe. The first co-current contacting system (421a) receives a predominantly vapor phase (420) of the feed gas stream. Each co-current contacting system includes a co-current contactor (428) and a separation system (432). Each co-current contactor includes a droplet generator and a mass transfer section (430). The droplet generator generates droplets from a liquid and disperses the droplets into a gas stream. The mass transfer section provides a mixed, two-phase flow having a vapor phase and a liquid phase. The separation system separates the vapor phase from the liquid phase.
### Abstract:
The present invention relates to: a magnetic force control device for controlling magnetic force on a working surface by controlling an arrangement state of a freely rotating permanent magnet by means of a coil; and a magnetic body holding device using the same. The magnetic force control device according to one embodiment of the present invention comprises: a first pole piece, which has a working surface, is made of a ferromagnetic body, and comes in contact with the N pole of a permanent magnet; a second pole piece, which has a working surface, is made of a ferromagnetic body, and comes in contact with the S pole of the permanent magnet or a permanent magnet other than the permanent magnet; a rotary permanent magnet rotatably formed so as to achieve a first arrangement state in which the N pole is magnetically connected to the second pole piece and the S pole is magnetically connected to the first pole piece and a second arrangement state in which the N pole is magnetically connected to the first pole piece and the S pole is magnetically connected to the second pole piece; and a coil wound around the first pole piece and/or the second pole piece, wherein a current to be applied to the coil is controlled such that the rotary permanent magnet is rotated, thereby allowing switching between the first arrangement state and the second arrangement state, and thus magnetic forces on the working surfaces of the first pole piece and the second pole piece are controlled.

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No. of Pages: 47 No. of Claims: 30
Provided is an environmental equipment control device capable of immediately causing execution of control for improving the physical/mental state of a user. This environmental equipment control device (100) for controlling a plurality of types of environmental equipment (10, 20, 30) comprises: an ascertainment unit (60) that ascertains current physical/mental state information of a user, environmental situation information, and target relationship information expressing the relationship between a target mental/physical state and a current mental/physical state; a learning control plan output means (80) for outputting a control plan for each combination of the plurality of types of environmental equipment (10, 20, 30) in accordance with the current physical/mental state information, the environmental situation information and the target relationship information; and a selection control unit (90) that selects and executes one control plan from among the plurality of control plans output by the learning control plan output means (80). The learning control plan output means (80) uses the physical/mental state of the user, which was changed by the execution of the control plan selected by the selection control unit (90), to learn so as to update a specific method of the control plan to be output.
Methods and compositions are provided for assessing CRISPR/Cas-induced recombination of a target genomic locus with an exogenous donor nucleic acid in vivo or ex vivo. The methods and compositions employ non-human animals comprising a CRISPR reporter such as a genomically integrated CRISPR reporter for detecting and measuring CRISPR/Cas-induced repair of a coding sequence for a catalytically inactive reporter protein through recombination with an exogenous donor nucleic acid. Methods and compositions are also provided for making and using these non-human animals.
A terminal device provided with: a reception unit which receives RRC information indicating a maximum number X of CBGs for one transport block per serving cell; and a generation unit which generates X HARQ-ACK bits corresponding to one transport block. The transport block includes NCB code blocks (CB). When the number NCB of the CBs is smaller than the maximum number X of the CBGs, the number of CBGs for the transport block is NCB, and the generation unit generates, as X HARQ-ACK bits, NCB HARQ-ACK bits for NCB CBGs and X-NCB NACKs.
A method is proposed for temporarily isolating a well interval comprising: injecting a first suspension into the well, said first suspension containing a viscous carrier fluid, degradable particles and degradable fibres until a first filtering layer is formed; injecting a second suspension into the well, said second suspension containing a viscous carrier fluid, non-degradable particles and degradable fibres until a second filtering layer is formed. The first suspension and the second suspension do not mix when injected into a well. For optimum isolation of an interval, the ratio of the volume of the first suspension to the volume of the second suspension is from 1:5 to 2:1. A method for repeated hydraulic fracturing in an interval having a plurality of hydraulic fractures, and a method for reduced-impact killing of a well are also proposed. The technical result is the absence of clogging of a well and degradation of the isolating layer.
An electronic device with a touch sensitive surface is provided. With a scaled down readout circuitry dedicated to only a sub area of the touch sensitive surface, an in-display fingerprint recognition solution with low power consuming is possible.
The present subject matter relates to seed treatment formulations comprising fluensulfone, their processes of preparation and methods of use.
Title of the invention: PHARMACEUTICAL NANOSUSPENSION FOR THE THERAPY OF HIV INFECTION

Abstract:
The present invention relates to a pharmaceutical composition (nanosuspension) for a long-acting injectable (LAI) drug for the long-term maintenance therapy of HIV/AIDS. A pharmaceutical nanosuspension for use as an injectable drug for the long-term maintenance therapy of HIV infection is claimed, comprising a composition that contains, as an active ingredient, a compound of general formula 1 in crystalline or polycrystalline form, in which R is C2H5CONa+, NH2.

No. of Pages: 15 No. of Claims: 10
(54) Title of the invention : EXPANDABLE SHEATH AND METHODS OF USING THE SAME

(51) International classification : A61M25/00, A61F2/24, A61B17/34

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(32) Priority Date : 21/06/2017
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(57) Abstract :
Disclosed herein are expandable introducer sheaths and methods of making and using the same. The sheaths minimize trauma to a patient's vasculature by allowing for temporary expansion of a portion of the sheath to accommodate passage of a delivery system for an implant, then return to a non-expanded state after the passage of the device. The sheath includes a foldable inner member having a detached flap structure at its distal tip that facilitates expansion of the sheath lumen to increased diameters, and an elastomeric distal end that reduces push and retrieval forces therethrough. The sheath can include a hemostasis seal on its proximal end to prevent the leakage of blood out of the sheath and prevent ballooning of outer layer of the sheath.
The present invention relates to a motor vehicle rotary electric machine (100) drive assembly, the drive assembly comprising a rotor shaft (2) extending along a longitudinal axis (X) and a connecting piece (4) providing connection between the shaft and the torque transmission system comprising a bore (41) for the passage of the rotor shaft, the drive assembly being characterized in that the bore comprises a first wall (41a) extending axially and a cylindrical second wall (41b) extending axially in alignment with the first wall, and in that the rotor shaft comprises: a first surface (21) extending axially and cooperating with the first wall of the bore to centre the connecting piece around the rotor shaft; and a second cylindrical surface (22) extending axially and provided with knurling, with a diameter (A) greater than the diameter (A) of the second wall of the bore, the connecting piece being force-fitted onto the rotor shaft by means of the knurling.
A reinforcement strand (400) comprises a core (403) around which steel filaments (404) are twisted all with the same final lay length and direction. The steel filaments are arranged in an intermediate layer comprising N first steel filaments and an outer layer of 2N steel filaments circumferentially arranged around the intermediate layer. In the intermediate layer filaments will contact one another at a closing lay length that is determined by the number of steel filaments N in the intermediate layer, the diameter of the core and the diameter of the first steel filaments. By choosing the final lay length and direction equal to the between two and six times the closing lay length gaps will form between the intermediate layer filaments. The 2N outer layer filaments are further divided into a group of smaller (408) and a group of larger (406) diameter steel filaments.
A baffle assembly and burner including the baffle assembly. The baffle assembly includes a collar having a central axis and an inner circumferential surface. A plurality of vanes are secured to the inner circumferential surface of the collar. Each vane includes a leg extending from the collar at a first angle with respect to the central axis. The first angle of the leg is configured to impart rotation to a flow of fluid through the baffle assembly. An impingement plate extends from the leg at a second angle with respect to the central axis. The second angle is greater than the first angle.
An aluminosilicate zeolite comprising at least 90% phase pure AEI zeolite crystals, the crystals having a plate-shaped morphology. In embodiments, at least 50% of the crystals have at least one ratio in at least one pair of dimensions in the range from 3:1 to 20:1, and thickness of 30-100 nm. A process of making the AEI zeolite comprising reacting an oxide of silicon, faujasite, a quaternary ammonium compound comprising 2,4,4,6-tetramethylmorpholinium cation, alkali metal hydroxide and water at at least 100°C. to form crystals of a zeolite having an AEI framework. A crystalline AEI zeolite having pores comprising a 2,4,4,6-tetramethylmorpholinium cation. The zeolite may comprise at least 90% phase pure AEI zeolite with the 2,4,4,6-tetramethylmorpholinium cation within pores of the zeolite. In some embodiments the zeolite comprises crystals having a plate-shaped morphology and with the 2,4,4,6-tetramethylmorpholinium cation within pores of the AEI zeolite.
In the hot-pressed member according to the present invention, after the component composition thereof is properly adjusted, the microstructure thereof is configured so that the average particle size of prior austenite crystal particles is at most 8 µm, the volume fraction of martensite is at least 90%, at least 10 cementite particles having a particle size of at least 0.05 µm are present on average per 200 µm² of the cross section parallel to the thickness direction of the member, and at least 10 Ti-based deposits having a particle size of less than 0.10 µm are present on average per 100 µm² of the cross section parallel to the thickness direction of the member in the range from the surface of the member to a depth of 100 µm in the sheet thickness direction. Thereby, the hot-pressed member not only has an extremely high tensile strength TS of at least 1780 MPa after hot pressing, but excellent delayed fracture resistance and high cross tensile strength after resistance spot welding.
Title of the invention: BUOY WITH BUOYANT CORE AND COLLAR HAVING MULTIPLE FLOTATION COMPONENTS

Abstract:
The present invention relates to a buoy having a buoyant core component around which is a collar with a plurality of detachable flotation components. Preferably, the flotation components are secured to the core using a downward lip projection around a periphery of the core component and an upward lip projection on the detachable flotation components which engages a recess behind the downward lip component. In preferred embodiments, the buoy is more than 2.5 metres diameter, while the diameter of the core component is 2.35 metres or less. A tie bar assembly and lifting/mooring mounts may be located on the core.
Provided is a radio frequency interference processing method. The method comprises: acquiring a first signal intensity value of a first radio frequency antenna; determining whether the first signal intensity value is lower than a preset threshold value; and when it is determined that the first signal intensity value is lower than the preset threshold value, turning off the display of information in a first area. The present invention reduces the radio frequency interference of a display screen component to a radio frequency component, and improves the efficiency of a radio communication.
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(57) Abstract :
Provided are a battery (100) for electronic equipment and electronic equipment (200). The battery (100) comprises a body module (1), a device module (2), a wrapped layer (3), a first insulating film (4), a second insulating film (5), and an easy-to-pull tape (6). The easy-to-pull tape (6) comprises a bonding portion (61), a glue-free region (62) and a hand pulling portion (63), wherein the bonding portion (61) is located at one end of the easy-to-pull tape (6), the hand pulling portion (63) comes round the device module (2) and is overlapped with the first insulating film (4), and the glue-free zone (62) is located between the bonding portion (61) and the handle portion (63), and the glue-free region (62) is bonded to the wrapped layer (3).
Title of the invention : A METHOD AND SYSTEM FOR THE AUTOMATIC FEEDING OF A STRIP OF ELASTOMERIC MATERIAL TO A USER UNIT

Abstract :
A method and system for automatically feeding a strip (4) of elastomeric material to a user unit (8) by means of a feeding line (12) comprising an inlet conveyor (13) adapted to receive the strip (4) from a calender (10), an outlet conveyor (14) adapted to feed the strip (4) to an applicator device (11) of the strip (4) onto the user unit (8), and a shuttle (16) to transfer a head portion of the strip (4) from the inlet conveyor (13) to the outlet conveyor (14) and to assume, once the head end of the strip (4) has been released onto the outlet conveyor (14), a variable tensioning position, wherein it engages the strip (4) so as to form a bend along the path of the strip (4).
The invention relates to a method for supplying electric power to an electric supply network (120) at a network connection point by means of a converter-controlled supply device, in particular by means of a wind park (112) or a wind turbine (100). In order to supply the electric power, a selection can be made at least between a current-impressing operating mode and a voltage-impressing operating mode. In the current-impressing operating mode, a current target value is substantially or largely controlled or regulated, and in the voltage-impressing operating mode, a voltage target value is substantially or largely controlled or regulated.
Title of the invention: ROTOR BLADE FOR A WIND TURBINE AND WIND TURBINE

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Abstract:
The invention relates to a rotor blade for a wind turbine, to a wind turbine comprising a tower, a nacelle and a rotor, and also to a wind farm. The rotor blade (108) comprises an inner blade section (2) that extends from a rotor blade root (1) in the longitudinal direction of the rotor blade (108), and a trailing edge segment (40, 74, 112, 112), arranged on the inner blade section (2), for increasing the profile depth of the rotor blade (108) along a section in the longitudinal direction of the rotor blade. The rotor blade (108) has a pressure-side surface (4, 48) and a suction-side surface (6, 50), which are each formed in certain regions by parts of the inner blade section (2) and of the trailing edge segment (40, 74, 112, 112). One or more air outlets (24, 68) and air inlets (22, 22, 66) extending substantially in the longitudinal direction of the rotor blade are formed on both the pressure-side surface (4) and the suction-side surface (6) of the rotor blade (108), in the region of the trailing edge segment (40, 74, 112, 112), said air outlets and air inlets being interconnected in a fluid-guiding manner. At least one covering element (26, 26, 60) overlapping the at least one air outlet (24, 68) and by means of which the air outlet (24, 68) can be closed or opened is arranged on the suction-side surface (6).

No. of Pages : 16 No. of Claims : 19
The present invention performs the layout design for a small area in a short period of time while satisfying design rules. This layout design system comprises a processing unit. A circuit diagram and layout design information are input into the processing unit. The processing unit includes a function for generating layout data from the circuit diagram and the layout design information by performing Q learning. The processing unit includes a function for outputting the layout data. The processing unit comprises a first neural network. The first neural network estimates an action value function for the Q learning.
Title of the invention : HOMOGENEOUS ASSAY

Among other things, the present invention is related to devices and methods of performing biological and chemical assays, such as but not limited to immunoassays and nucleic assay acid, particularly the homogeneous assay that does not use the step of wash and that is fast (e.g. 60 seconds from dropping a sample to displaying results).
Disclosed is a mobile control unit (200) for a wind turbine comprising a plurality of components (130-150). The mobile control unit (200) includes a supply module (210) that has a main control unit (211) and at least one control module (220-240), coupled to the supply module (210), for controlling the wind turbine components. The main control unit (211) is used for controlling the wind turbine components (130-150) by means of the control modules (220-240) that are connected to the supply module (210).
Title of the invention: METHOD FOR SUPPLYING ELECTRIC POWER INTO AN ELECTRIC SUPPLY NETWORK BY MEANS OF A CONVERTER-CONTROLLED SUPPLY DEVICE

Abstract:
The invention relates to a method for supplying electric power to an electric supply network (320), which has a network voltage (U) with a network frequency (f) with a network nominal frequency, by means of a converter-controlled supply device (300), in particular by means of a wind park (112) or a wind turbine (100). The supply device for supplying the electric power supplies a supply current (I) in the form of an electric alternating current (I) with a frequency, phase (φ), and a supply voltage (U), and at least one of the variables from the list containing the frequency (f) of the supply current (I), phase (φ) of the supply current (I), supplied power, and supply voltage (U) can be adjusted. The method has the steps of estimating a converter component of a network section of the electric supply network (320), wherein the converter section specifies a ratio of power supplied by the converter to the power supplied in total, and controlling the supply of the electric power depending on the estimated converter component.
Wind turbine rotary connection (200) for two wind turbine parts (102, 110; 103, 105; 106, 114; 108, 106) which are rotatable relative to one another about an axis of rotation (R), said rotary connection (200) comprising a combined axial-radial bearing (1, 21; 1a, 1b) that includes an axial bearing component (5, 25) and a separate radial bearing component (7, 27). In particular, according to the invention, the axial bearing component (5, 25) is in the form of a sliding bearing component having a first, convex bearing surface (9, 29) and a corresponding second, concave bearing surface (11, 31).
The invention relates to a workstation of an air-jet spinning machine, having a spinneret (1) for producing a yarn (2) from a fibre assembly (3) which is supplied to the spinneret (1), wherein: the spinneret (1) has an internal swirl chamber (4) and an inlet (5) for the fibre assembly (3); the spinneret (1) has a yarn-forming element (6) which extends at least partially into the swirl chamber (4); the spinneret (1) has air nozzles (7) via which air can be introduced into the swirl chamber (4) to cause the fibre assembly (3) to rotate in the region of the yarn-forming element (6); the spinneret (1) has an outlet (8) via which the yarn (2) can be pulled out of the swirl chamber (4); the spinneret (1) comprises at least two spinneret sections (9; 10) which delimit the swirl chamber (4) to the outside, a first spinneret section (9) of the at least two spinneret sections (9; 10) having the inlet (5) for the fibre assembly (3), and a second spinneret section (10) of the at least two spinneret sections (9; 10) having the outlet (8) for the yarn (2); and the second spinneret section (10) is mounted such that it can be moved relative to the first spinneret section (9) and, at least in some sections, can be moved linearly from a closed position into an open position, the yarn-forming element (6) being accessible to an operator and cleanable in the open position. According to the invention, the first spinneret section (9) is mounted such that it can be moved, starting from a basic position, away from the second spinneret section (10) to improve the accessibility of the yarn-forming element (6) further. The invention also relates to a method for opening a spinneret (1) of an air-jet spinning machine.
The present invention relates to a polymer composition, to an article comprising the polymer composition, preferably to an article which is a photovoltaic (PV) module comprising at least one layer element (LE) comprising the polymer composition and to a process for producing said article, preferably said photovoltaic (PV) module.
**Title of the invention:** HOLDER FOR CUTTING TOOL

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**Abstract:**
A holder for cutting tool according to an embodiment of the present invention supports a cutting insert having a rake surface, a flank surface, and a cutting edge. The holder for a cutting tool according to the embodiment includes a holder main body having a seating surface on which the cutting insert is placed, a pressing member for positioning and fixing the cutting insert on the holder main body, and a fixing member for fixing the pressing member to the holder main body. The pressing member has a tip portion which is an end portion close to the cutting edge and a base end portion which is an end portion far from the cutting edge. The tip portion is provided with a first coolant ejection port. A first flow path is provided inside the holder main body. A coolant reservoir and a second flow path are provided inside the pressing member. In the direction from the tip portion to the base end portion, the coolant reservoir is disposed closer to the base end portion than the position where the pressing member is fixed to the holder main body.
User equipment performing communication with a core network node by using network slices obtained by logically dividing a network includes: means for sending information related to security of one network slice; and means for sending identity information of the one network slice in a secure method, based on a request to send information in the secure method sent from the core network node based on the sent information.
Title of the invention : POLYPROPYLENE COMPOSITION WITH EXCELLENT SURFACE APPEARANCE

Abstract:
The present invention is directed to a heterophasic polypropylene composition (HC) comprising a modified polypropylene composition (mPP), a process for preparing said heterophasic polypropylene composition (HC) and an article comprising said heterophasic polypropylene composition (HC). The present invention is further directed to the use of a composition comprising a peroxide (PO) and a crosslinking agent (CA) to reduce tigerskin of a polypropylene composition (PP).

No. of Pages : 46 No. of Claims : 16
Systems and methods suitable for extracorporeal lung support are provided that expose blood, across a semipermeable membrane, to a dialysis liquid. The dialysis liquid features a buffering agent and has a high buffering capacity for H+ ions. Carbon dioxide, bicarbonate and hydrogen cations are transported across a semipermeable membrane into the dialysis liquid. The dialysis fluid may be recycled and repeatedly used, and its pH may be adjusted, and other fluids added to it. Certain substances may be removed from the blood, and the amount of these substances removed from the blood may be substantially automatically or substantially continuously monitored or quantified. The systems and methods are suitable for treating or preventing respiratory acidosis, metabolic acidosis, and diseases featuring lung malfunction, kidney malfunction, or liver malfunction.
A thermally conductive sheet according to the present invention contains a thermally conductive filler and is characterized by having a thermal conductivity of 7 W/m·K or more, a 30%-compressive strength of 1500 kPa or less, and a tensile strength of 0.08 MPa or more. According to the present invention, a thermally conductive sheet that is excellent in thermal conductivity, flexibility, and handleability can be provided.
The invention relates to a process for removal of volatile components from an olefin polymer, the process carried out in an extruder comprising at least one vacuum degassing zone, said process comprising the steps of: (a) introducing a stream of an olefin polymer into the extruder; (b) extruding the olefin polymer in the extruder at a temperature which is higher than the melting temperature of the olefin polymer but lower than the decomposition temperature of the olefin polymer, thereby producing an olefin polymer melt having reduced amount of volatile components, wherein the process in the extruder has a residence time distribution broadness ($s_2$) in the range of 800 to 4000 as defined by equation (1) wherein: $s_2$ is the residence time distribution broadness, $T$ is the mean residence time, $t$ is the interval of residence time a fluid element of the olefin polymer spends in the extruder, $E(t)$ is the residence time distribution function, and wherein the process optionally comprises a step (c) where the melt of the olefin polymer is passed through a die zone to a pelletizer for pelletizing the obtained olefin polymer.
Title of the invention: SEALING GASKET WITH SPECIALIZED REINFORCING RING FOR SEALING PLASTIC PIPELINES

Abstract:
A pipe sealing gasket is shown which is designed to be received within a raceway provided within a socket end of a female bell plastic pipe end which is assembled with a mating male pipe end to form a plastic pipe joint. The raceway in the female bell plastic pipe end is preformed during manufacture and the gasket is installed thereafter. The gasket has a rubber body portion which is reinforced by a hard plastic band formed as a series of integral, spaced wedges which are interconnected by a flexible ribbon. The gasket is flexible enough to be flexed and placed in the pipe raceway and yet the hard plastic band acts to prevent extrusion of the gasket during a variety of pressure conditions as well as preventing displacement during field assembly.
Self-righting articles, such as self-righting capsules for administration to a subject, are generally provided. In some embodiments, the self-righting article may be configured such that the article may orient itself relative to a surface (e.g., a surface of a tissue of a subject). The self-righting articles described herein may comprise one or more tissue engaging surfaces configured to engage (e.g., interface with, inject into, anchor) with a surface (e.g., a surface of a tissue of a subject). In some embodiments, the self-righting article may have a particular shape and/or distribution of density (or mass) which, for example, enables the self-righting behavior of the article. In some embodiments, the self-righting article may comprise a tissue interfacing component and/or a pharmaceutical agent (e.g., for delivery of the active pharmaceutical agent to a location internal to the subject). In some cases, upon contact of the tissue with the tissue engaging surface of the article, the self-righting article may be configured to release one or more tissue interfacing components. In some cases, the tissue interfacing component is associated with a self-actuating component. For example, the self-righting article may comprise a self-actuating component configured, upon exposure to a fluid, to release the tissue interfacing component from the self-righting article. In some cases, the tissue interfacing component may comprise and/or be associated with the pharmaceutical agent (e.g., for delivery to a location internal to a subject).
Title of the invention: PROCESS TO PRODUCE HYDROGEN FROM UNDERGROUND GEOTHERMAL RESERVOIRS

Abstract:
A geothermal reservoir induces gasification and water gas shift reactions to generate hydrogen. The hydrogen or protons are produced to surface by using hydrogen-only or proton-only membranes in production wells. Energy from the reservoir is produced to surface as protons or hydrogen.

No. of Pages: 7 No. of Claims: 32
The disclosure provides derivatives of both the oxidized form and the reduced form of nicotinamide riboside (NR) and nicotinic acid riboside (NAR). The NR and NAR derivatives have improved stability and bioavailability compared to NR and NAR, and can increase cellular NAD+ levels and improve mitochondrial function. Therefore, the NR and NAR derivatives are useful for treating mitochondrial diseases, mitochondria-related diseases and conditions, and other disorders and conditions.
This invention provides an unexpectedly stable, highly crystalline form of the di-HCl salt of 2-((5-(4-isopropylpiperazin-1-yl)pyridin-2-yl)amino)-7,8-dihydro-6H-spiro[cyclohexane-1,9-pyrazino[12:15]pyrrolo[2,3-d]pyrimidin]-6-one for advantageous therapeutic pharmaceutical efficacy and dosage form stability.
The positive electrode active material having high capacity and excellent cycle performance is provided. The positive electrode active material has a small difference in a crystal structure between the charged state and the discharged state. For example, the crystal structure and volume of the positive electrode active material, which has a layered rock-salt crystal structure in the discharged state and a pseudo-spinel crystal structure in the charged state at a high voltage of approximately 4.6 V, are less likely to be changed by charge and discharge as compared with those of a known positive electrode active material.
The present invention relates to a hypochlorous acid sterilizing water composition, and provides a hypochlorous acid sterilizing water composition formed by mixing a hypochlorous acid composition and water in a predetermined volume (L), the hypochlorous acid composition comprising: 87.0-97.0 wt% of a mixture comprising citric acid and acetic acid in a predetermined weight ratio; and 3.0-13.0 wt% of sodium hypochlorite. According to an embodiment of the present invention, hypochlorous acid sterilizing water is prepared by mixing a predetermined amount of sodium hypochlorite into a mixture comprising citric acid and vinegar, and thus odorless sterilizing water, which has no odor even while exhibiting a sterilizing effect for a predetermined time, can be provided, and the present invention can be generated to have a stable pH value at a high concentration even while preventing chlorine gas generation from hypochlorous acid sterilizing water, and can also maintain sterilizing power for a long time even when making contact with organic matter.
**Title of the invention:** PROCESSES FOR THE PREPARATION OF AN APOPTOSIS-INDUCING AGENT

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<th>(71) Name of Applicant:</th>
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<td>ABBVIE INC.</td>
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**Abstract:**

Provided herein is a process for the preparation of an apoptosis-inducing agent (A1), and chemical intermediates thereof. Also provided herein are novel chemical intermediates related to the process provided herein.

No. of Pages: 51 No. of Claims: 16
The present disclosure enables methods of identifying the VH and VL class pairs in the human immune repertoire, determining the VH and VL class pairs that are most prevalent and those having favorable biophysical properties. More specifically, the collections of the present disclosure comprise the most prevalent and/or preferred VH and VL class pairings with highly diversified CDRs.
Herein described are solid compositions for the oral administration of dyes, and diagnostic use thereof. Preferably, such diagnostic use is aimed at the diagnostic evaluation of the gastrointestinal tract.
A covered electrical wire comprising a conductor and an insulation covering layer that covers the periphery of the conductor, wherein the conductor is a stranded wire in which a plurality of strands that are formed from a copper alloy are concentrically twisted, the copper alloy includes 0.01mass% to 5.5mass% in total of one or two or more elements selected from Fe, Ti, Mg, Sn, Ag, Ni, In, Zn, Cr, Al, and P, the remainder consisting of Cu and unavoidable impurities, and the amount of oil adhesion on a surface of a center strand that is positioned in a center section of the stranded wire is 10μg/g or less in relation to the mass of the center strand.
(54) Title of the invention : TREATMENT OF CUTANEOUS DISORDERS

| (51) International classification      | :A61K8/368,A61K31/34 |
| (31) Priority Document No             | :62/516061          |
| (32) Priority Date                    | :06/06/2017         |
| (33) Name of priority country        | :U.S.A.             |
| (86) International Application No    | :PCT/US2018/036353  |
| Filing Date                          | :06/06/2018         |
| (61) Patent of Addition to Application Number | :NA               |
| Filing Date                          | :NA                |
| (62) Divisional to Application Number | :NA               |
| Filing Date                          | :NA                |

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| 2) DAVIDSON, Matthew, Gene  
| 3) RIEGER, Jayson, Michael |

(57) Abstract :  
Methods of treating one or more skin lesions using cantharidin as well as associated compositions, treatment regimens, kits, devices, and systems are provided. A method of treating a subject having one or more skin lesions may involve administering a composition comprising cantharidin to one or more skin lesions. The method may allow for the efficacious treatment of the skin lesion(s) with minimal or no adverse side effects (e.g., severe adverse side effects, permanent damage of the dermal tissue, scarring, excessive blistering of skin surrounding the lesion, elevated plasma cantharidin concentration, systemic exposure to cantharidin). The efficacy and/or safety of the treatment may be due to certain features of the composition and/or prolonged exposure of the skin lesion(s) to cantharidin. The methods described herein may be used for a wide variety of cutaneous disorders, including skin disorders that primarily affect the epidermis of skin.

No. of Pages : 58 No. of Claims : 25
The invention relates to an expansion joint (1) for joining two adjacent parts of a pipe. The expansion joint (1) comprises an expansion bellows (5), an expanded wall (2) and an inner sleeve assembly (8). The expanded wall (2) comprises a first wall part (3) and a second wall part (4), wherein the first wall part (3) and the second wall part (4) are spaced apart from each other axially by an axial gap. The expansion bellows (5) is connected to the first wall part (3) and to the second wall part (4) such that the axial gap between the first wall part (3) and the second wall part (4) is closed and such that the first wall part (3) and the second wall part (4) are connected flexibly. The expanded wall (2) and the inner sleeve assembly (8) limit at least one sealed chamber (9, 10) between each other, and the at least one sealed chamber (9, 10) is filled by a first gas.
Title of the invention: ISOCYANATE-FUNCTIONAL SILICONE-POLYETHER COPOLYMER, SILICONE-POLYETHER-URETHANE COPOLYMER FORMED THEREWITH, SEALANTS COMPRISING SAME, AND RELATED METHODS

Abstract:
An isocyanate-functional silicone-polyether copolymer having a particular structure is disclosed. A method of preparing the isocyanate-functional silicone-polyether copolymer is also disclosed, the method comprising reacting a polyether compound and an organosilicon compound to give the isocyanate-functional silicone-polyether copolymer. A silicone-polyether-urethane copolymer formed therewith, as well as a method of preparing the silicone-polyether-urethane copolymer, are also disclosed. Sealants comprising the isocyanate-functional silicone-polyether copolymer and/or the silicone-polyether-urethane copolymer are further disclosed.

No. of Pages: 53 No. of Claims: 21
(54) Title of the invention: INFORMATION PROCESSING DEVICE, INFORMATION PROCESSING METHOD, INFORMATION PROCESSING SYSTEM, DISPLAY DEVICE, AND RESERVATION SYSTEM

| (51) International classification | :G06Q50/10 |
| (31) Priority Document No | :2017-199063 |
| (32) Priority Date | :13/10/2017 |
| (33) Name of priority country | :Japan |
| (36) International Application No | :PCT/JP2018/028439 |
| Filing Date | :30/07/2018 |
| (86) International Publication No | :WO/2019/073661 |
| (61) Patent of Addition to Application Number | :NA |
| Filing Date | :NA |
| (62) Divisional to Application Number | :NA |
| Filing Date | :NA |

(57) Abstract:
Provided is an information processing device comprising a reaction information use part for using reaction information indicating a reaction by a user to presentation information, if the use of the reaction information has been permitted.

No. of Pages : 47 No. of Claims : 17
**Title of the invention:** SURGICAL SYSTEM SHAFT INTERCONNECTION

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**Abstract:**
A surgical instrument assembly comprising a proximal shaft assembly comprising a proximal drive member and a distal shaft assembly attachable to and detachable from the proximal shaft assembly is disclosed. The distal shaft assembly comprises a distal drive member configured to be coupled to and decoupled from the proximal drive member, wherein the distal drive member is configured to be actuated through a drive stroke by the proximal drive member. The drive stroke comprises a beginning of stroke position, an end of stroke position distal to the beginning of stroke position, and a home position. The proximal drive member and the distal drive member are configured to be coupled to and decoupled from each other when the proximal drive member and the distal drive member are in the home position, wherein the home position is not at the beginning of stroke position or the end of stroke position.

**Diagram:**

![Diagram](image)

**FIG. 1**

No. of Pages : 99 No. of Claims : 25
A surgical instrument assembly configured to be attached to and detached from a surgical robot is disclosed. The surgical instrument assembly comprises a drive system actuable in a first direction and a second direction which is opposite the first direction, wherein the drive system is configured to perform an instrument function, a shaft, and an end effector. The surgical instrument assembly further comprises a drive system bailout comprising position indication means for indicating the position of the drive system and an actuation member configured to actuate the drive system in the first direction and the second direction, wherein the direction in which the drive system bailout is operated is based on the position of the drive system indicated by the position indication means.
A surgical system comprising a surgical instrument attachment assembly and a transmission assembly is disclosed. The surgical instrument attachment assembly comprises a shaft and an end effector. The transmission assembly is configured to be operably attached to and detached from a surgical robot, wherein the surgical instrument attachment assembly is configured to be operably attached to and detached from the transmission assembly. The transmission assembly comprises a drive system comprising a drive member movable in a first direction during a drive stroke and a second direction during a return stroke. The transmission assembly further comprises a manually-operated bailout configured to selectively move the drive member in the first and second directions when the transmission assembly is attached to the surgical robot.
Title of the invention: THREAD BRAKING DEVICE FOR A WEFT FEEDER DEVICE

Abstract:
Thread braking device for a weft feeder device (1) comprising an annular braking band (15) for forming a braking zone (16) for a weft thread (7), wherein the braking band (15) is supported by the support structure (17), wherein the support structure (17) is at least partly elastically deformable by an axial force exerted on the support structure (17), wherein the support structure (17) is provided with at least one stiffening element (41, 43) surrounding the braking band (15) at a rear side of the braking band (15), wherein in a non-deformed state of the support structure (17) the braking band (15) is arranged at a distance of the stiffening element (41, 43) and by exerting an axial force on the support structure (17), the support structure (17) is deformable so that the braking band (15) at the rear side of the braking band (15) is supported by the stiffening element (41, 43). Weft feeder device with such a thread braking device (3).
Title of the invention: METHOD AND SYSTEM FOR IMPROVED TRANSACTION PROCESSING AND ROUTING

Abstract:
A method for intelligent switching for multiple transaction types includes: storing a plurality of action events, each associated with one of a plurality of data types and including corresponding executable processes; storing each of the executable processes corresponding to each action event; receiving a data message from a third party system; identifying a specific data type of the data message; and executing a specific action event that is associated with the specific data type, wherein executing the specific action event includes executing each of the corresponding executable processes, at least one of the corresponding executable processes includes transmitting the received data message to an authorization system associated with the specific data type, and the plurality of data types includes at least a financial transaction message and an automated clearing house message.
| (12) PATENT APPLICATION PUBLICATION | (21) Application No.202017001117 A |
| (19) INDIA | |
| (22) Date of filing of Application : 10/01/2020 | (43) Publication Date : 07/02/2020 |

### Title of the invention:
SURGICAL DEVICES AND SYSTEMS WITH ROTATING END EFFECTOR ASSEMBLIES HAVING AN ULTRASONIC BLADE

### Abstract:
Surgical devices and systems having rotating end effector assemblies for treating tissue are provided. Methods for using the same are also provided.

### Priority Document:
- Number: 15/654428
- Date: 19/07/2017
- Country: U.S.A.

### International Application:
- Number: PCT/US2018/042295
- Date: 16/07/2018

### International Publication:
- Number: WO/2019/018289

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### Name of Inventor:
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No. of Pages: 41
No. of Claims: 20
Disclosed in an embodiment of the present invention are a data scheduling method and a related device. The method comprises: a user equipment unit receiving control information from a network device; the user equipment unit determining, according to the control information, a version of duplicated data to be transmitted on a licensed resource; and the user equipment unit transmitting, on the licensed resource, data corresponding to the version. The embodiment of the present invention can be used to ascertain which version of data is served by a user equipment unit by means of a licensed resource provided by a network.
The invention concerns a screen (1) for silk-screen printing, intended for printing electrically conductive patterns (5, 6, 7, 8) on glass sheets and comprising a main mesh (2), the aperture size of the main mesh (2) being larger in a side portion (C) than in the central portion (A), said screen (1) further comprising, on at least a double mesh area located in said central portion, at least one secondary mesh (3) attached to one face of the main mesh (2), the aperture size of the secondary mesh (3), or of each of the secondary meshes, being larger than that of the main mesh (2) in the central portion, and the aperture of the secondary mesh (3), or of each of the secondary meshes, forming, with that of the main mesh (2), an angle α of 1 to 89°. The invention also relates to a method for obtaining this screen, a method for producing glazing units and a glazing unit (4) coated on one face thereof with electrically conductive patterns (5, 6, 7, 8).
The present invention relates to a positive electrode for a lithium secondary battery, a manufacturing method therefor, and a lithium secondary battery comprising the same, the positive electrode comprising a positive electrode mixture layer formed on a positive electrode current collector, wherein the positive electrode mixture layer comprises a positive electrode active material and a lithium ion additive, wherein the lithium ion additive is a lithium ion conductive ceramic material represented by chemical formula 1 below, and wherein the lithium ion conductive ceramic material has a structure in which lithium ions are additionally inserted into empty sites having a Na super ionic conductors-type (NASICON-type) structure. [Chemical formula 1] \( \text{Li}^{1+x_1+y_1}M_1^{2x_1}(\text{PO}_4)_3 \) wherein, \( M_1 \) is at least one of Ti and Ge; \( M_2 \) is at least one selected from the group consisting of Al, Cr, Ga, Fe, Sn, In, Lu, Y, and La; and \( 0 \)
**Title of the invention:** COOLING SYSTEM FOR HIGH-PERFORMANCE COMPUTER

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**Abstract:**
A cooling system for blades of a high performance computer thermally couples blade electronics to the computer's liquid cooling system through one or more heat pipes, without requiring a liquid conduit on, or liquid coupling to, the blade. Moreover, illustrative embodiments allow a blade to be installed in a high performance computer and engage the cooling system without making a liquid connection, and to disengage from the cooling system and be removed from the high performance computer without breaking a liquid connection.

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**Name of Inventor:**
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2) LUNSMAN, Harvey J.
An exhaust gas treatment system which is able to purify an exhaust gas having a moisture content, and which is provided with superheated steam generation pipes (20, 40) and a housing (10). The superheated steam generation pipes (20, 40) are formed from a material that is capable of generating heat by means of application of an electric current, and have flow paths (200, 400) through which the exhaust gas is able to be flowed; and the moisture content contained in the exhaust gas flowing through the flow paths is converted into superheated steam by means of the heat. The housing (10) is provided so as to be able to contain the superheated steam generation pipes, and is configured so that the exhaust gas is able to be flowed therein before being introduced into the flow paths; and the exhaust gas is able to be preheated by means of the heat of the superheated steam generation pipes.
| (12) PATENT APPLICATION PUBLICATION | (21) Application No.202017001208 A |
| (19) INDIA | |
| (22) Date of filing of Application: 10/01/2020 | (43) Publication Date: 07/02/2020 |

| (54) Title of the invention: MAGNESIUM-CONTAINING METAL MATERIAL PROVIDED WITH COATING |
| (51) International classification: C23C28/04, B32B9/00, B32B15/04 |
| (31) Priority Document No: 2017-122643 |
| (32) Priority Date: 22/06/2017 |
| (33) Name of priority country: Japan |
| (36) Name of Applicant: 1) NIHON PARKERIZING CO., LTD. |
| Address of Applicant: 15-1, Nihonbashi 1-chome, Chuo-ku, Tokyo 1030027 Japan |
| (86) International Application No: PCT/JP2018/023448 |
| Filing Date: 20/06/2018 |
| (61) Patent of Addition to Application Number: NA |
| Filing Date: NA |
| (62) Divisional to Application Number: NA |
| Filing Date: NA |

| (71) Name of Applicant: |
| (72) Name of Inventor: |
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| 2) OTSUKI, Tetsuo |
| 3) YOROZU, Takayuki |
| 4) KATSURAYA, Ryoko |
| 5) KAMIYAMA, Naosumi |

| (57) Abstract: |
Provided is a magnesium-containing metal material provided with, on the surface thereof, a coating having excellent corrosion resistance. Specifically, provided is a magnesium-containing metal material with a coating, characterized by having: a first coating that contains magnesium hydroxide and that is disposed on the surface of a magnesium-containing metal material containing magnesium or a magnesium alloy; a third coating that contains hydroxyl apatite and/or hydroxyapatite carbonate and that is provided above the first coating; and a second coating that contains dibasic calcium phosphate and that is interposed between the first coating and the third coating.

No. of Pages: 27 No. of Claims: 2
Title of the invention: METHOD FOR SEPARATING MAMMALIAN SPERMS, ARTIFICIAL INSEMINATION METHOD, AND IN VITRO FERTILIZATION METHOD

Abstract:
Provided are: a method for separating mammalian sperms, whereby it becomes possible to separate a large quantity of sperms within a short time and it also becomes possible to prevent the deterioration in movement of the separated sperms; an artificial insemination method; and an in vitro fertilization method. In the method for separating mammalian sperms, the sperms are cultured in a culture medium containing a TLR7 ligand and are then separated into sperms floating in an upper layer in the culture medium and sperms precipitating in a lower layer in the culture medium. The artificial insemination method and the in vitro fertilization method are methods in which the artificial insemination and the in vitro fertilization in a non-human mammal are carried out, respectively, using sperms of the non-human mammal which are separated by a method for separating mammalian sperms.
Disclosed herein are methods, systems, and devices that are associated with downlink (DL) control, grant free (GF) transmission, or initial access. Particularly, disclosed herein are multi beam physical downlink control channel (PDCCH) transmission mechanisms, grant free transmissions mechanisms, demodulation reference signal (DMRS) for physical broadcast channel (PBCH) mechanisms, and DMRS sequence design for new radio-channel state information-reference signal (NR-CSI-RS) and new radio-physical downlink shared channel (PDSCH) (NR-PDSCH), among other things.

FIG. 3

No. of Pages : 41 No. of Claims : 15
A first aspect of the invention relates to leucine, acetyl-leucine, or a pharmaceutically acceptable salt thereof, for use in treating or preventing a migraine, or one or more symptoms associated therewith. A second aspect of the invention relates to a method of treating or preventing a migraine, or one or more symptoms associated therewith, in a subject, said method comprising administering to the subject a therapeutically or prophylactically effective amount of leucine, acetyl-leucine, or a pharmaceutically acceptable salt thereof.