INTRODUCTION

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

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

6TH MARCH, 2020
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# THE PATENT OFFICE
KOLKATA, 06/03/2020

Address of the Patent Offices/Jurisdictions

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

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<td>Office of the Controller General of Patents, Designs &amp; Trade Marks, Boudhik Sampada Bhavan, Near Antop Hill Post Office, S.M. Road, Antop Hill, Mumbai – 400 037</td>
<td>Phone: (91)(22) 24123311, Fax: (91)(22) 24123322</td>
<td><a href="mailto:cgpdtm@nic.in">cgpdtm@nic.in</a></td>
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<td>Phone: (91)(11) 25300200 &amp; 28032253, Fax: (91)(11) 28034301 &amp; 28034302</td>
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<td>The Patent Office (Head Office), Government of India, Boudhik Sampada Bhavan, CP-2, Sector –V, Salt Lake City, Kolkata- 700 091</td>
<td>Phone: (91)(33) 2367 1943/44/45/46/87, Fax: (91)(33) 2367 1988</td>
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- The States of Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu and the Union Territories of Puducherry and Lakshadweep.
- The States of Gujarat, Maharashtra, Madhya Pradesh, Goa and Chhattisgarh and the Union Territories of Daman and Diu & Dadra and Nagar Haveli.

Website: [www.ipindia.nic.in](http://www.ipindia.nic.in)  
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All applications, notices, statements or other documents or any fees required by the Patents Act, 1970 and The Patents (Amendment) Act, 2005 or by the Patents (Amendment) Rules, 2006 will be received only at the appropriate offices of the Patent Office.

Fees: The Fees may either be paid in cash or may be sent by Bank Draft or Cheques payable to the Controller of Patents drawn on a scheduled Bank at the place where the appropriate office is situated.
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<td>(91) (22) 24123311</td>
<td>(91) (22) 24123322</td>
<td><a href="mailto:cgptm@nic.in">cgptm@nic.in</a></td>
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<td>(91) (44) 2250 2081-84</td>
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<td>(91) (33) 2367 1943/45/46/87</td>
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वेबसाइट: http://www.ipindia.nic.in
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पेटेंट अधिनियम, 1970 तथा पेटेंट (संशोधन) अधिनियम, 2005 अधिनियम पेटेंट (संशोधन) नियम, 2006 द्वारा बांधित सभी आवेदन, सूचनाएं, विवरण या अन्य दस्तावेज़ या कोई शुल्क पेटेंट कार्यालय के केवल उपयुक्त कार्यालय में स्वीकृत होंगे।
शुल्क: शुल्क या तो नवन रूप में या Controller of Patents के नाम में वेस बैंक क्राफ्ट या चेक के द्वारा भेजी जा सकती है जो उसी स्थान के किलिय अनुसूचित बैंक में प्रदत्त हो जाएगी।
SPECIAL NOTICE

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

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

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

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

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

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

SPECIAL NOTICE

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

The following patent applications have been published under section 11A (2) of The Patents (Amendment) Act 2005 and rule 24A of The Patents (Amendment) Rules, 2006. Any person may file representation by way of opposition to the Controller of Patents at the appropriate office against the grant of the patent in the prescribed manner under section 25(1) of the Patents (Amendment) Act 2005 read with the rule 55 of The Patents (Amendment) Rules, 2006:

(12) PATENT APPLICATION PUBLICATION

(21) Application No.201811044295 A

(19) INDIA

(22) Date of filing of Application : 24/11/2018

(43) Publication Date : 06/03/2020

(54) Title of the invention : A SOLAR AIR HEATING CUM SPACE HEATING COLLECTOR SYSTEM

(51) International classification

:F24S 20/40

(31) Priority Document No

: NA

(32) Priority Date

: NA

(33) Name of priority country

: NA

(36) Name of priority country

: NA

(86) International Application No

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Filing Date

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: NA

Filing Date

: NA

(71) Name of Applicant :

1) Naveen Gahlawat

Address of Applicant : VPO Kher Sadh, Dist. Rohtak, Haryana, India Haryana India

(72) Name of Inventor :

1) Naveen Gahlawat

(57) Abstract :

The present invention claims a solar air heating apparatus comprises of a vacuum tube based manifold wherein the vacuum tube based manifold comprises of non-vacuum tubes and vacuum tubes in a concentric arrangement, a fan wherein the fan is connected to the entrance of the manifold and a collection chamber wherein the collection chamber is connected to the other end of the manifold. The present invention also claims a process for heating air wherein the air is passed through the vacuum tubes, wherein the air flowing through the vacuum tubes is heated by the solar rays, the heated air is passed through the vacuum tubes by means of the fan into the collection chamber.

No. of Pages : 16 No. of Claims : 8
A safety introducer needle assembly (10) having an introducer needle (12) defining an axial direction (A), the needle (12) having an outer surface (24) and an inner surface (26) defining a lumen (28) which extends along the length of the needle (12) in the axial direction (A); the outer surface (24) defined by a wall of the needle (12) forming a needle shaft (14) that extend along the axial direction (A) having a distal end (16) and a proximal end (18), wherein the proximal end (18) connected to a needle hub (22) and the distal end (16) comprising a sharp bevelled tip (20) wherein the needle (12) has a roughened or echogenic region (34) having echogenic features (36); and a needle tip protector (40) housed in a safety barrel (42) and slidably arranged on the needle shaft (14) from moving beyond the needle tip (22) and wherein the safety barrel (42) is engageably attached to the needle hub (22).
The present invention provides a safety garment or a safety wearable for providing protection to a person against an attack, anytime anywhere. The safety garment is equipped with multiple safety devices that can be activated within seconds, at a time of emergency, and help in counter-attacking an attacker in such situations. In an embodiment, the safety garment is a jacket. In an embodiment, the safety garment is equipped with safety devices, including, but not limited to a fire emission device, a GPS tracker, an anesthesia device, a camera such as a night vision spy camera, an electric shock producing device, and the like. All the safety devices are activated quickly to protect a wearer. The devices like GPS tracker, spy cam may be activated all the time, to provide live tracking of the wearer and to record video or audio live. Fig.1

No. of Pages : 21 No. of Claims : 15
Title of the invention: DISEASE DETECTION DEVICE

Abstract:
A device for disease identification by observing tongue symptoms using deep learning techniques, comprising a data storage module associated with the device for storing images, a data input module connected to the storage module for capturing and transferring an image of the tongue for analyzing process, a data segmentation module associated with the data input module for extracting predefined area of the tongue from the image, a data analyzing module connected to the segmentation module for analyzing the image of the tongue and determining infected and uninfected parts of the tongue, a data classification module connected to the analyzing module for classifying the analyzed parts of the image to determine the diseases and area infected by the diseases, an output module associated with the classification module for showing information about analyzed image of the tongue to the user. Ref Figure 1

No. of Pages: 11 No. of Claims: 10
Title of the invention: FUTURO COOLING SYSTEM WITH INTEGRATED IOT

Abstract:
Todays HVAC systems is based on the vapor compression cycle. This causes high electricity consumption and additionally, the cooling agent used is also toxic and environmentally hazardous. To overcome this problem Futuro Cooling System with Integrated IOT is designed. The main component of proposed air conditioning system is indoor unit, outdoor unit, cooling module, evaporator unit, power distribution unit & condenser unit. In our cooling solution, we are completely removing the conventional vapour compressor with our newly developed cooling module. This cooling module is the heart of the air conditioning system which is helping for cooling and heating of the cooling agent and also it is work like a reservoir tank. The cooling model is a hexagonal structure in which long fin structure and thermal cooler are present at each wall. We are using the cold side of the thermal cooler to conduct the cold to the fins and cooling agents. Similarly, we are using inhibited Ethylene Glycol as cooling agent which have higher thermal conductive property. In the inner fin structure, the cooling agent will be cool down up-to -3° to -7°C. Then the coolant is pumped by the powerful hydraulic pump through the indoor evaporator unit. In the indoor unit, the ambient hot air will be cooled down by the evaporator and the cooled air is circulating by the blower. As output we can get about 16 to 22-degree centigrade cold air. Similarly, the hot side of the thermal cooler will be cooled down by the small metal cube which is attached at each surface and coolant. The coolant transfers the heat from the hot side the condenser unit by help of pump. In the condenser unit the coolant is cooled down to room temperature by circulating on it. A blower fan will be present inside the outdoor unit to cool down the condenser unit to surrounding. The whole system is consuming about 600wattage of energy.
This invention relates to an anti-tumbling cup and in particular, this invention relates to an anti-tumbling cup which is applied to a water cup that prevents the cup from tumbling or being knocked over, and to avoid damage to surrounding documents or electronic devices. More particularly, this present invention relates to an anti-rumbling cup wherein the anti-rumbling assembly may be fixedly connected to the bottom of the cup by an engagement connection or a screw connection. Furthermore, this invention also relates to an anti-rumbling cup which has the beneficial effects of having convenient to move and carry and having safely, low in cost and is convenient to popularize.
**Title of the invention:** NUTRIENT ENRICHED PELLETS

**Abstract:**

The present invention claims a nutrient enriched pellet comprising of a roughage consisting of rice straw and hay combination, a dry leguminous fodder which could be alfalfa, a concentrate mixture comprising of maize, wheat, de-oiled mustard cake, mustard cake, soybean meal, rice bran, de-oiled rice bran, mineral mixture and salt and a binder which is molasses or guar gum or a combination thereof.

No. of Pages : 18  No. of Claims : 7
All manufacturers of diesel vehicles (4-wheelers or higher) claim that the engine of their vehicle would work at better efficiency if the owners follow the recommendations given in their instruction manuals. There remains different mileage figure for the same capacity of vehicle engine designed by different manufacturers. They would also not part with their know-how in order to prevent others from working on it. An alternative which can be thought of as a means to increase the engine efficiency is to preheat the fuel before it goes to engine. Though this contributes to the purpose, but needs inputs of extra energy. As this does not increase efficiency to an appreciable extent, this is not a viable proposition. However, as per this present invention, it has been found that a lot of scope still exists for further improving the engine efficiency. Herein new designs have been worked out in order to further increase vehicle diesel engine efficiency. There have been considered two modes of increasing the efficiency of vehicle diesel engines- viz. (i) by internal recovery/conserving of heat by redesign of silencer in order to utilise it back in the engine and (ii) by designing the optimum advance of fuel injection; these two together leading to 11-15 % increase in engine efficiency.
Title of the invention : METHOD OF PREPARATION OF CONPLAS PAVER BLOCK UTILIZING WASTE POLYTHENE BAGS

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<th>(57) Abstract :</th>
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<td>The present invention relates to a method of preparation of paver block utilizing waste polythene bags. The object of the proposed invention is to utilize sustainable waste material and analogously minimizing the consumption of fine aggregate by replacing it with waste polythene bags in shredded form. The composition for preparation of sustainable conplas paver blocks comprises of cement (17.15%, 416.67 kg), fine aggregate (26.79%, 650.95 kg), coarse aggregate (48.15%, 1170 kg), waste polythene bags (1.71%, 41.55 kg) and water (6.19%, 150.5 kg) for production of one cubic meter concrete. Conplas paver blocks have unique feature of high impact resistance and energy absorption capacity. Following invention is described in detail with the help of Figure 1 of sheet 1 showing schematic presentation with dimensions of the sustainable conplas paver block.</td>
</tr>
</tbody>
</table>

Name of Applicant :
1) College of Technology and Engineering, Maharana Pratap University of Agriculture and Technology (MPUAT), Udaipur
   Address of Applicant : College of Technology and Engineering, Maharana Pratap University of Agriculture and Technology (MPUAT), Udaipur - 313001 (Rajasthan) Rajasthan India
2) Dr. Trilok Gupta
3) Dr. Sandeep Chaudhary
4) Dr. Ravi Kumar Sharma
5) Dr. Sudhir Jain
(54) Title of the invention : SYSTEM AND METHOD FOR ACCREDITING VEHICULAR EMISSIONS

(51)
International :H04L0029060000,G06Q0030000000,H04B0007185000,B60R0016037000,G06F0021570000
classification
(31) Priority Document :NA
No
(32) Priority Date :NA
(33) Name of priority country :NA
(86)
International Application :NA
No
Filing Date :NA
(87)
International Publication : NA
No
(61) Patent of Addition to Application :NA
Number :NA
Filing Date :NA
(62)
Divisional to Application :NA
Number :NA
Filing Date :NA
(57) Abstract :
The present disclosure provides a system and a method for accreditation of vehicular emissions of user vehicles. The accreditation system 102 receives a first set of data packets from a first computing device 120, where the first set of data packets is associated with a request to accredit the user vehicle 130, and determines a first location associated with the received first set of data packets. The accreditation system 102 receives from a plurality of accrediting vehicles 106, corresponding current state of availability, current location and type of accreditation provided by each of the plurality of accrediting vehicles 106, and accordingly, the nearest, available and suitable accrediting vehicle 106 is selected to be deployed based on the determined location, where the deployed accrediting vehicle 106 generates an accreditation report for the user vehicle 130 based on emission attributes of the user vehicle 130.

No. of Pages : 37 No. of Claims : 10
(54) Title of the invention: CONVERTING BIOMASS INTO BIODEGRADABLE UTILITY PRODUCTS

(51)
International: C05F0017000000, A01K0067033000, G05B0013020000, C12N0009240000, C05F0009040000

(31) Priority
Document: NA
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Date: NA

(57) Abstract:
(A) - State of the Art and Utility
The Whole initiative projected has been planned for a ecofriendly recycling of the plant waste for general utility means like food packaging, showpieces and even in creation of Decorative drawing room art - pieces too with further bright expansion scopes. And later the residue left over through biodegradation (vermiculture methodology) to produce organic manure for use in home kitchen gardening and flowering pots. This way plant waste has been targeted for better use and recycled for the most effective residue conversion. It is the most eco friendly, convenient, cost effective, less hazardous and a softly welcome. (B) - The Economics
The project has been considered taking care of availability rather scavenging of the plant waste employing usually practiced physical method and minimum of the state of art facility. (C) - A Significant Issue
The utilization of plant garbage is ethnically suitable as the disposition after use is further involves the economic production of organic manure. The story line is a must welcome under prevailing contemporary climate resilience issues.

No. of Pages: 10
No. of Claims: 10
Title of the invention: NANOWIRE BASED SOLAR CELL ARRAYS

Abstract:
The partial concentrator photovoltaic (CPV) module with a stacked structure comprising a highly transparent CPV module and a Si cell, which aims to maximize the power generation from global normal irradiation (GNI) by harvesting not only direct, but diffuse sunlight as well. The module has the optimised optical and heat transfer characteristics, and its performance has been evaluated by outdoor and indoor tests using a sub-module with a geometrical concentration ratio of 100x. The sub-module achieves diffused sunlight transmission of over 80%, thus generating more power from diffuse sunlight. Under clear-sky condition, the sub-module with a single-sided Si cell exhibits the maximum GNI-based module efficiency of 30.7%. The sub-module with a bifacial Si cell further improves the power generation and tolerance to tracking error angle for various sunlight conditions. FIG. 1(a).

No. of Pages: 22 No. of Claims: 12
(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application : 17/02/2020

(43) Publication Date : 06/03/2020

(54) Title of the invention : TENSILE TEST FIXTURE ARRANGEMENT FOR O-RING SPECIMEN IN DIAMETRICAL TENSION OF CERAMIC MATERIALS

| (51) | International : G01N00003080000, G01N00003040000, G01N00003020000, G01N00003060000, G01N0000310000 |
| (31) | Priority Document : NA |
| (32) | Priority Date : NA |
| (33) | Name of priority country : NA |
| (86) | International Application : NA |
| (87) | International Publication No. Filing Date : NA |
| (61) | Patent of Addition to Application : NA |
| (62) | Divisional to Application : NA |

| (71) Name of Applicant : |
| 1) Dr. Awani Bhushan |
| Address of Applicant : Department of Mechanical Engineering, Meerut Institute of Engineering & Technology, NH-58 Near Baghpat Crossing, Delhi-Roorkee Highway, Meerut Uttar Pradesh India | Uttar Pradesh India |
| 2) Meerut Institute of Engineering & Technology |
| 3) Nomendra Tomar |
| 4) Dr. Swapan Suman |

| (72) Name of Inventor : |
| 1) Dr. Awani Bhushan |
| 2) Nomendra Tomar |
| 3) Dr. Swapan Suman |

(75) Abstract :
The present subject matter relates to tensile test fixture arrangement (10) for O-ring specimen, comprises two grip plates (1) with holes at both ends; a pair of pins (3); a cross-head yolk (5) with a lock nut (6) configured to attach a Universal Testing Machine (UTM) by a pin-system or thread system; a plurality of chain journals (2) and chains (4) configured to align itself when the load is applied through the UTM; wherein one end of the grip plates (1) is attached with the O-ring specimen from both ends via the pins (3) to test in diametrical tension, and the other end of the grip plates (1) is attached with the chain journals (2) and chains (4) with the cross head yolk (5) with lock nut attachment (6).

No. of Pages : 21 No. of Claims : 7
The objective is to construct a highly reliable drone that can be used for disaster relief purposes and prove to be a life saver in calamitous scenarios. We have devised a technique to make our octa-copter capable of transporting goods weighing about 30 kg for flight duration of over 50 minutes. The scientific basis is to make an intelligent battery pack from li ion cells which have high energy density of 100-265wh/kg. With an intelligent battery power system based on master-slave concept using lithium ion cells a redundant power system has been designed. This unconventional power bank is embedded in our modular frame design with battery first approach to impart additional structural strength. Computer vision based navigation using stereo camera and depth sensing allows completing mission in GPS denied areas as well as acting as a redundant layer for failure due to bad weather conditions. The octa-copter will be fully autonomous and capable of long range missions for pin-point dropping of supplies in disaster struck areas. To make our octa-copter practical in flooded areas we plan to make it water and dust proof so that it completes mission objectives in all types of weather conditions. It is also equipped with advanced ground control systems for active tracking and with sensors like lidar and camera for situation awareness.

No. of Pages : 15  No. of Claims : 4
Title of the invention: A POLYHERBAL UNANI FORMULATION MAJOOON SURANJAN EFFECTIVE AGAINST CANCER CELLS ALONE AS WELL AS IN COMBINATION WITH ANTICANCER DURG SORAFENIB.

Abstract:
Majoon suranjan is a polyherbal Unani formulation used in the treatment of rheumatoid arthritis (RA). It has anti-inflammatory activity. Sorafenib is a type of targeted cancer drug called a cancer growth blocker. This invention is directed towards studying the effect of Majoon suranjan in combination with Sorafenib in decreasing the percent cell viability of both the cancer cell lines. We observed that Majoon suranjan along with sorafenib showed a greater decrease in cell viability as compared to when sorafenib was given alone. Our data suggest that Majoon suranjan along with sorafenib inhibits the growth of cancer cells and could be used as a potential adjuvant in the cancer patients undergoing sorafenib based therapy.

No. of Pages: 8
No. of Claims: 4
The present invention relates to a gasifier system (100) for power generation from biomass. The present invention includes a triple reactor gasifier (104), a primary gas cooling unit (116), a hot air distributor (122), a secondary gas cooling unit (130), an IC engine (138), an electric power generator (140). The triple reactor gasifier (104) includes a pyrolyzer zone (106), a gasification reactor zone (108) and a tar cracker zone (110). The gasification reactor zone (108) generates producer gas and attached below the pyrolyzer zone (106). The tar cracker zone (110) eliminates the presence of tar in the producer gas and attached below the gasification reactor zone (108). Herein the present invention performs gasification of biomass thus producing the producer gas that is free from tar. An IC engine (138) burns a mixture of air and producer gas to generate mechanical torque. The electric power generator (140) is connected to the IC engine (138) that uses mechanical torque for electricity generation. Fig.1
The Invention UC-TOOL is a tool provided for the unlocking of car doors despite the existence of anti-theft tools such as an inner shell (both side). The tool is bent in such a way so as to circumvent the inner shell placed in car doors by manufacturers which prevent the use of other door unlocking tools. The tool also is bent in such a way so as to unlock a car door despite the existence of anti-theft tools such as plastic coating on the locking bar that prevents other earlier tools from being used. The tool is a continuous high metallic rod bent at precise angles (0 Degree to 180 Degree rotate) and at precise lengths (Length increase and decrease according to user requirement) so as to take advantage of the spaces in between the window and the outer shell, the hole within the inner shell, and the distance between the hole and the inner shell and the locking tool. The tool is constructed very efficiently and cheaply.

No. of Pages: 26
No. of Claims: 9
**Title of the invention**: VAT- MACHINES : VIRTUAL AUTOMATED TELLER MACHINES

**Abstract**:

My Invention VAT- MACHINES An automated teller machine (ATM) which includes a plurality of peripherals including a National and international user interface for interacting with a user providing user information; a plurality of virtual automated teller machines (VAT-MACHINES) resident in the ATM, the VAT- MACHINES s networked to a plurality of financial institutions, each VAT-MACHINES capable of using its own ATM intelligent software application and capable of providing its own colour full, interactive menu of banking options to the National and international user; and an interface to communicate between the VAT- MACHINES s 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 VAT- MACHINES 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.

No. of Pages : 24 No. of Claims : 7
Reproductive and Sexual Health education to school children and adolescents is a challenge for teachers and is seldom taught in a way to create medically appropriate, affirmative outlook towards sexuality. Discussing sexuality is considered a taboo. The problem is much more compounded by myths associated with sex information resulting in poor sexual behavior, teenage pregnancy, sexually transmitted infections & sexual crimes. There is also consequently high incidences of low birth weight babies birth, maternal and perinatal deaths. Low birth weight babies, gender discrimination are also responsible for population explosion. Our invention based on Active learning principle, Flipped Classrooms, where basic information about sexual and reproductive health is provided through a mobile application to be viewed at home by the students at his/her own pace. The class time in school is then, utilized for deeper learning, analysis, clarification in presence of a facilitator and use of Audience Response System (ARS) or Clickers. The sexual and reproductive health needs of adolescents in India are currently overlooked or are not understood by the Indian healthcare system. These are also not integrated well into Life skills module. Conventional approaches mostly consist of didactic lectures or talks but seldom encourage active participation. The present innovative will enable and empower adolescent girls and boys with knowledge and skills to take care of their own health during reproductive years resulting in healthy community. The methodology of using mobile app and ARS is innovative and results were quite encouraging in the intervention group with high level of satisfaction compared to control group.
Title of the invention: ACCURATE MICROFLOW MEASURING RAIN GAUGE UNHINDERED BY DUST AND DEBRIS

Abstract:
An accurate and improved rain gauge in which microflow measurement system is installed along with a funnel system. The microflow measurement is done by suitable device that includes a main controller board to get all the values. The device is Bluetooth enabled to send data to local mobile or live feed. The log generation is carried out using external memory with Real time clock and can be get log from device. The funnel system helps in measuring variable rain flow and the measurement is unhindered by dust and debris that accompany the rain.

No. of Pages: 14 No. of Claims: 10
**Title of the invention**: ADVANCED ONLINE RETAIL SOLUTION FOR MOBILE

**Abstract**:

This advanced online retail solution for mobile research paper comprises of the Design Solution which further comprises of the Design Components and the Direct Purchase Feature. This research paper also contains the Express Buy Feature. The design solution of this advanced online retail solution for mobile could be compared to a mathematical equation. As each component in an equation is significant to the complete mathematical equation, so is each component of the design solution significant in the completeness of the design solution. The design solution is completed together by the Design Components and the Direct Purchase Feature. The advantages of the design solution present in this research paper are the simultaneous properties of reduced time complexity to reach to the nth product of purchase and high user ease in locating the specific product location of any of the product. The first feature, which is the Direct Purchase feature is integral to the design solution. The second feature is the Express Buy feature. The advantages of the Features are reduced time and complexity to complete the product purchase.

No. of Pages : 15 No. of Claims : 3
An augmented reality based training system comprises a targeting unit embedded with at least one optical marker; emulating headset comprising a set of sensors to sense one or more attributes of the at least one optical marker. A processing unit to determine position of the targeting unit with respect to the emulating headset by selecting a first set of attributes from the sensed one or more attributes, wherein the first set of attributes is associated with position parameters of the targeting unit. Determine orientation of the targeting unit with respect to horizontal plane and vertical plane by selecting a second set of attributes from the sensed one or more attributes, wherein the second set of attributes is associated with orientation parameters of the targeting unit, responsive to triggering of the targeting unit at the determined position and orientation of the targeting unit, determine position of the target that gets hit.
**Title of the invention:** HUMANOID ROBOT FOR ENERGY EFFICIENCY MOVEMENT WITH OPTIMIZED CONTROL

**Abstract:**
The present invention is related to a system of a humanoid robot for energy efficiency movement with optimized control. The objective of present invention is to solve the anomalies presented in the prior art techniques related to energy efficiency movement with optimized control of humanoid robot.

No. of Pages : 23
No. of Claims : 5
Title of the invention: A METHOD FOR PREPARATION OF REINFORCED PAPER LAMINATES FROM WASTE-PAPER

Abstract:
The present invention discloses a method for preparation of reinforced paper laminates from waste-paper. The reinforced paper laminates having a hardness is 50 Brinell hardness number at load 100 kg using ball indenter. The method comprising the following steps: a. Making of wire-frame mould; b. Cutting waste-paper into uniform pieces; c. Preparation of a first solution by mixing water and glue; d. Filling mould cavity completely with said uniform pieces and also applying said first solution to form a paper core; e. Drying naturally by air said mould cavity filled with waste-paper; f. Separating said paper core from said mould; g. Pressing of said paper core with the help of rollers; h. Covering said paper core with a markin cloth by one or two layers; i. Applying a second solution on the external surface of said paper core; j. Drying applied said second solution; k. Coating said paper core from step (j) with a rooftop waterproofing solution; l. Drying applied said waterproofing solution; and m. Coating with an oil based paint to prepare reinforced paper structure.
Title of the invention: GOLDEN HOUR

Abstract:
There are always two people sitting in an Ambulance. The idea is the Ambulance driver shall fix his destination on the software (Application). The Notification of his request will be received on our server and accordingly the people using our application including people driving vehicles who are within the selected road range of the Ambulance Driver, shall be receiving an instant notification on their mobile phones to drive Right or Left, however the default direction should always be Left, but taking adverse circumstances in mind and contingencies arising on the Road; direction to keep Right will also be provided, so as to provide immediate help to the person in need and thereby providing true meaning to the term GOLDEN HOUR by making the person reach hospital on time and get medical assistance as if the people on the road will be notified in time. This notification shall also go to the authorities and its officers who manage traffic and all these efforts cumulatively comes with the following advantages:

- a) Everybody within the road range of destinations, setup by the Ambulances shall be notified in advance that they have to shift themselves to one side of the Road.
- b) The Notification will be a display on their Mobile Phones, which will also be received by the Traffic Police Officers deputed on the road, in order to manage the traffic accordingly.
- c) It will provide a solution to those people who are struggling for their lives and aid in giving life within the Golden Hour where every single second counts.
- d) It can also give an answer to questions prevalent within the Society which takes into dimension the lacuna for ill transportation of people who are deep in need of medical help.
- e) It can prove helpful to other emergency services like Fire Services, Police Services, Medical Services etc. which apparently are the lifelines of the entire nation.

No. of Pages: 6  No. of Claims: 5
**Title of the invention:** NITROCELLULOSE (NC) FREE PRINTING INK FOR EDIBLE AND PHARMACEUTICAL PRODUCTS PACKAGING APPLICATIONS

**Abstract:**

The present invention provides a nitrocellulose (NC) free printing ink for edible and pharmaceutical products packaging applications. The Nitrocellulose (NC) free printing ink composition of the present invention consists of about 5% to 15% by weight of a resin, about 6% up to 30% by weight of a colourant, about 65% to 85% by weight of an aromatic hydrocarbon free solvent, in particular, non-toluene and non-ketonic (NTNK) solvent or a mixture of such solvents, and about 3% to 7% by weight of additives. The solvents used in the formulation to dissolve the components of inks are aromatic-hydrocarbon-free solvents such as Ethanol, Propanol, Butanol, Methoxy propanol, n-Propyl Acetate, Methyl propyl acetate, and mixtures thereof. The printed articles especially printed aluminium foil using the Nitrocellulose (NC) free printing ink composition of the present invention exhibit excellent heat resistance and other pre and post application properties when printed on aluminium foil.

No. of Pages : 13  No. of Claims : 10
The invention discloses a virtual keyboard system for switching from application to application or recently visited application without need of any physical key, said system comprising: a processor; and a memory communicatively coupled to the processor, wherein the memory stores processor instructions, which, on execution, causes the processor to: add, by said virtual keyboard system, an extra panel in a virtual keyboard which includes a plurality of application icons and recently visited application icons; receive, by said virtual keyboard system, input of said virtual keyboard from the user, wherein said input is said plurality of application icons; fetch, by said virtual keyboard system, detail of input using Extensible Markup Language (XML) and Java libraries; and display, by said virtual keyboard system, said details of input to the display.
**Title of the invention**: SYSTEM AND METHOD FOR MEDICATION MANAGEMENT

**Abstract**:
The present disclosure relates to a method for managing medication compliance, the method comprising: pre-storing, one or more regimens of the users, and managing a time duration information during which the medication is to be consumed, by the user. Furthermore, a wearable band is used for: sensing medication intake, analyzing sensed data, matching determined consumed medication with pre-stored regimens to confirm that the correct medication is consumed, thereby notifying or alerting.

No. of Pages: 22
No. of Claims: 10
A method for automatically adjusting the volume of an audio device to compensate for noise that interferes with the intelligibility of a plurality of acoustic signals from the audio device. The method includes the step of computing reverberated wave with respect to each acoustic signal generated from the audio device through a computation module. The reverberated wave of the acoustic signals is computed through a binaural audio capturing device over a temporal scale. The method includes the step of quantifying a level of interference through a quantification module. The quantification module utilizes stable classification criteria to quantify the level of interference and initiates a request command for a reduction in the volume of the acoustic signals generated for clarity for human hearing. The most illustrative drawing: FIG. 3.
Title of the invention: A VEHICLE SEAT BELT MONITORING SYSTEM

Abstract:
The invention relates to a vehicle seat belt monitoring system, said system comprises of an IR camera, located in car so as to have direct view on the seat belt of front riders. A radio transmitter sends information from the camera. Also, a microcontroller receives information from the IR camera which informs the ignition relay to block the ignition if seat belts are not buckled by the riders. The proposed invention make use of IoT sensors along with the relay to handle the ignition process of the vehicle. The proposed scenario provides an additional security as if the front seat belts are not buckled then the driver will not be able to ignite the vehicle.

No. of Pages: 11 No. of Claims: 5
**Title of the invention:** A SUPPORT STAND RETRIEVAL SYSTEM FOR A TWO WHEELER VEHICLE

**Abstract:**
The invention relates to a support stand retrieval system for a two wheeler vehicle. More particularly, the invention relates to a safe system, wherein the support stand does not moves down until the vehicle is stand still. The support stand retrieval system for a two wheeler vehicle, comprises of a gyroscope positioned rigidly so as to sense tilt of the vehicle and a velocity sensor, wherein the velocity sensor and the gyroscope both sends information to the microsensor.

No. of Pages : 13  No. of Claims : 9
<table>
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<th>(12) PATENT APPLICATION PUBLICATION</th>
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<tr>
<td>(19) INDIA</td>
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<td>(22) Date of filing of Application :24/02/2020</td>
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<td>(43) Publication Date : 06/03/2020</td>
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| (54) Title of the invention : SHORT DISTANCE TELEMETRY SYSTEM FOR ELUCIDATION |
| (51) International :E21B0047120000,H04W0004140000,C07D0231120000,G06T0011200000,H04L0007000000 |
| (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 No : NA |
| (62) Divisional to Application No : NA |
| (57) Abstract : The present invention discloses short distance telemetry system for elucidation, especially to function as virtual instructor in laboratory and museums. The system comprises a master unit communicably coupled with a slave unit, in which the master unit is configured to elucidate the details of an object to which the slave unit is attached. The disclosed invention is reliable, efficient and less complex as opposed to the complex solutions of the prior art. Figure 1. |

| Name of Applicant : 1) University of Petroleum and Energy Studies |
| Address of Applicant : Energy Acres, Bidholi, Premnagar, Dehradun, Uttarakhand, India-248007 Uttarakhand India |
| Name of Inventor : 1) Ankur Kohli 2) Jasjit Singh 3) Dr. Natraj Mishra 4) Dr. Deepak Kumar 5) Dr. Abhay Kumar 6) Radhika Shah 7) Arnav Kathuria 8) Deepanshu Goyal |

No. of Pages : 21 No. of Claims : 10
**Title of the invention: IMRO-RESEARCH: INTELLIGENT RESEARCH METHOD FOR RESEARCHING OBJECT**

<table>
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<tr>
<th>International</th>
<th>G06N0005020000, G06Q0010000000, G06N0005040000, G01N0015140000, E21B0040000000</th>
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**Abstract:**

My Invention IMRO-Research is fully help to Indian research scholar, Scientist and Research and Developing Organization. The concept and methods that provide for automated research into the workings of one or more studied systems include automated research software modules that communicate with domain knowledge bases, research professionals, automated laboratories experiment objects, and data analysis processes, wherein automatically selected experiment objects can be run at an automated laboratory to produce experimental outcome results, and the subsequent data-processing providing automated guidance to a next other round of experiment choice and automated research. An Experiment Director rules engine chooses Experiment Objects based on user input through a Query System Software.

No. of Pages: 27  No. of Claims: 9
The present invention is related to a system of cyber security for a cloud environment with network visualization. The objective of present invention is to solve the anomalies presented in the prior art techniques related to cyber security for the cloud environments.
The invention IMI-AC-PERFORMANCE: INTELLIGENT METHOD TO INCREASING AIR CONDITIONER PERFORMANCE AND DECEASING MAINTENANCE.

Abstract:
The invention IMI-AC-Performance A method and apparatus for increasing air conditioner efficiency, performance comprising means and method to cool the high temperature high pressure gas output of the air conditioning unit compressor pump at or before the unit condenser utilizing water which has been pre-treated to retain particulate matter dissolved and suspended therein in order that scale not be formed upon the high pressure tubing and fins of the condenser. As a result IMI-AC-Performance of the cooling, the air conditioning unit operates with increased efficiency and reduced compressor head pressures for longer life. Additionally, means and method are provided for controllably regulating the flow of the cooling water and spray to protect the compressor from damage as a result of the increased efficiency and also manage the temperature, pressure, equipment life, electricity cost reduce, maintenance etc. can protect.

No. of Pages : 23 No. of Claims : 5
Title of the invention: REFORMATION IN VOTING SYSTEM

Abstract:
The present voting system made by Election Commission is that voter can only give their vote from allotted voting area. Vote is Democracy Rights of the entire Citizen & be a responsible Citizen it is the basic duty for the Country. No one can give their vote if they are not present in the same allotted booth listed by Election Commission. So in that scenario they are not able to give their vote. The impact of current voting system makes average 60% to 70% polling. As per study & examination we can increase the polling percentage by changing Voting system in online mode. The maximum citizen has their Aadhar Card with Unique Identification Number. On time of registration for Aadhar Card candidate have to register their eye retina & finger print. In the online voting system voters can give their votes anywhere by allotted online voting booth define by Election Commission. The voters have to match their retina & figure print register in Aadhar Card then after they have to give their vote. The voters can give their vote from anywhere in the world. In that process the percentage can be increase by 90 % to 100 %.

No. of Pages : 8 No. of Claims : 5
The present invention provides a process for synthesizing defective titanium oxide (TiO2) microspheres coated glass beads. The process mainly comprises synthesizing defective titanium oxide (TiO2) microspheres and coating the same onto glass beads. The glass beads may comprise borosilicate glass beads. The present invention also provides a continuous photocatalytic reactor. The continuous photocatalytic reactor comprises defective titanium oxide (TiO2) microspheres coated glass beads, a tank, a solution inlet tube, a peristaltic pump, a reactor vessel, one or more visible light lamp, and a solution outlet tube. The present invention enables an industrial effluent treatment using defective titanium oxide (TiCh) microspheres coated glass beads. The present invention provides industrial effluent treatment comprising pharmaceutical pollutants such as antipyrine, amoxycillin, atenolol, bezafibrate, carbamazepine, cetirizine, clofibric acid, diclofenac, erythromycin, felbamate, and ibuprofen etc. FIG. 1

No. of Pages : 32 No. of Claims : 8
In Intelligent transportation systems traffic prediction system plays an imperative role. Future intelligent transport systems greatly depend on Vehicular Ad-hoc Network (VANET). They provide faultless services to the drivers on high-ways. For traffic control system drivers and passengers information system for example speed, travel time, congestion, emergency services, weather conditions alert and many more services pattern clearness and prediction of traffic are very much important. Due to troublesome non linear pattern these systems are complex. To avoid such problems this invention proposes Cloud Based Random Forest Algorithm (CRFA). Random Forest technique is used for road facility and predict next situation of traffic by traffic changeable in every short interval of time. The proposed algorithm uses Random Forest on VANET to consider route optimization, accident detection and prevention and provides different services to the drivers as well as passengers and maintains the Quality of Service (QOS) to the users. As it is on Cloud and Global Positioning System (GPS) even through foggy or misty conditions each vehicle would know precisely where it is moving and even if a target comes closer to another vehicle a flash of warning would be displayed on the screen with a loud beep sound, which results in the cut down of speed automatically for maintaining the speed and distance between the vehicles not only behind the target vehicle but also ahead of it. Police Control Room vans (PCR) is sent a SOS (as Save our Soul distress signal can be interpreted) during an emergency service call and at the equivalent time alert message is sent to nearest Police Picket and Medical services. CRFA has been compared with PSO Algorithm. Scheduling of virtual machines different techniques and algorithms have been proposed for dynamic scalability, dynamic load balancing and reallocating the resources. To utilize the resources proficiently in Dynamic Environment intelligent algorithms are used to minimize the make span scheduling and to make the results much effective. Energy utilization and time consumption is compared in between random forest algorithm and PSO algorithm. Energy utilization and Time consumption are 12.0 and 6.2% less than PSO algorithm.
The Humidity Controller Friability Apparatus (HCFA) is an apparatus which is used to determine the mechanical strength of compressed and uncoated tablets for the determination of Physical strength for transportation and stability of tablets. The Humidity Controller Friability Apparatus is designed to provide a humidity free environment for the test sample in the drum of apparatus that will provide precise results in friability. Humidity will controlled in drum of friability apparatus with the help of adsorbent (silica gel) and humidity monitoring device (hygrometer). Assembly of adsorbent (silica gel) and humidity monitoring device set on the middle groove in outside wall of rotating drum. Sample collection tray is perforated for better result. With the help of perforations breakage part of sample is removed in the lower rejection tray and de-dusted tablets after test are collected that will enhance precise result of weight. This invention is an addition with adsorbent (silica gel) and Humidity monitoring device, sample collection tray with perforation with a rejection tray. Fixed adsorbent perforated plate is place in the baffles of rotating Drum for the moisture absorb present in the environment of baffles. So That these types of designed apparatus are suitably help for the measurement of mechanical strength of a compressed a tablet with humidity controller.
This invention provides method and device of laser assisted electrochemical discharge machining (LA-ECDM) process for the processing of conductive and non-conductive materials. The beam of low power laser is focussed on surface of electrolyte in the vicinity of tool electrode. The purpose of laser is localized heating of electrolyte rather than to perform machining of work piece. The localized heating of electrolyte by laser stepped up the kinetics of electrochemical reactions and increases the temperature of electrolyte, yielding dense hydrogen bubbles and combines to form thinner and stable gas film around the tool electrode. Due to these features, the laser can be act as catalyst for machining of ECDM, whereas in the normal ECDM, the gas film is not stable in nature. The resulting stability of gas film yields improvement in overcut and taper of hole in laser assisted ECDM process.

No. of Pages : 19 No. of Claims : 3
The Ready to Use Herbal Edible Coating developed from corn starch by incorporating dried aqueous Tulsi (Ocimum sanctum) leaves extract and dried natural surfactant. The corn starch is a polysaccharide derived from Maize (Zea mays), have the ability to prevent the gases and moisture loss. Tulsi is useful and sacred herb which is used in medicinal purpose from many years. Tulsi leaves extract have many health beneficial properties such as antimicrobial, antioxidant, anticancer, anti diabetic, many others as well as it is act as natural preservative. Moreover the dried ber extract acted as a natural surfactant. Tulsi (O. sanctum), corn starch and dried ber extract are natural components of "Ready to use herbal edible coating™ which is fit for human consumption and beneficial for human health and this is the unique or novel character of this invention. The ready to use herbal edible coating applied on fresh produces which act as a protective covering against microbes, moisture, gases (CO2 and O2) and physical damages. The RTU herbal edible coating is environment friendly, low cost and time saving product So, it is a good option to replace the polymer packaging and other techniques.
The present invention presents a therapeutic combination Niclosamide with Doxorubicin for improved treatment of breast cancer. Niclosamide, an FDA approved anti-helminthic drug is repurposed as a Wnt signaling inhibitor for cancer therapy along with doxorubicin which is a first line treatment for breast cancer. The therapeutic combination of Niclosamide and doxorubicin caused synergistically enhanced death of breast cancer cells irrespective of their clinical subtype (viz. HR positive, HER2 positive and triple negative). Since single agent therapy proves to be inefficient in treating cancer and combination therapy is the need of the hour in clinics, such a combination therapy holds great potential to be an effective treatment option for breast cancer.
Abstract:
Present invention in general, relates to a system, apparatus and method of sequential air-inflated mattress/cushion apparatus, which provides support for a human body or portions thereof, when patients are unable to move themselves in bed due to hypo-kinetic movement disorders or any disability. The mattress/cushion apparatus is specially developed and arranged to prevent bed-sores and supporting persons with burns or disability. The invention is a sequential air-inflatable mattress/cushion apparatus with at least two groups of alternatively inflated chambers capable of being sequential inflation and deflation of chambers, which are uniquely designed and arranged in balloon like structure to provide enhanced support to human body and portions thereof. Being a cost-effective invention, it reduces financial burden on patients, and provides a significantly affordable mattress/cushion apparatus. Particularly, the present invention has an application in medical and clinical field as an ideal substitute for uncomfortable, unhygienic and expensive mattress/cushion apparatus, thereby counteracting bed-sores.
STORAGE SYSTEM: ADVANCED BUSINESS SERVICE MANAGEMENT SYSTEM.

The Patent Office Journal No. 10/2020 Dated 06/03/2020

Title of the invention: STORAGE SYSTEM: ADVANCED BUSINESS SERVICE MANAGEMENT SYSTEM.

Abstract:
My Invention STORAGE SYSTEM for controlling a layout of resources, the system comprising: a DBMS (Database Management System), being a database having manipulation tools thereof; at least two data items, stored in the DBMS, each encapsulated within an encapsulating data item, wherein each of the encapsulated data items being associated with one of a plurality of resources of the layout, each encapsulated data item comprising different characteristics of at least the resource; an infographic user interface comprising a plurality of icons, each associated with the data items, each icon presenting information related to an operation of the controlled resource thereof; the user interface further comprising data flow and operational dependency between the encapsulating data items regarding the encapsulated data items; wherein each of the icons being adapted to allow a user to change, by manipulating the icon, an operation of a resource associated with the icon also the system for supporting management decisions associated with manufacturing of service supply chains that span from a point of creation to a point of consumption and, more particularly, is directed to a system that allows the various decision makers in the supply chain to view the supply chain from their own perspective, obtain information and evaluate decisions concerning past, current and future performance with respect to a diverse set of often conflicting goals.

No. of Pages: 27
No. of Claims: 9
Nowadays, according to available literature, most of the wet and dry dhoop contain either plastics, wood powder or charcoal which are rich in carbon content and upon burning. It releases several toxic gases or volatile organic compounds which deteriorates indoor air quality and effects the health of person predisposing them at potential risk of getting effected. Aroma therapy incense being used in our dhoop which gives positive impact to the surrounding environment and also give peaceful climate and make mind peaceful. A small initiative has been taken by women for making organic dhoop which are made up of herbs and temple flowers. This dhoop doesn’t contain any plastic or chemicals substance to bind it.
METHOD OF FOOD DELIVERY FOR MATCHING SUPPLY AND DEMAND OF FOOD DONATORS AND FOOD RECEIVERS

Abstract:
Present invention is related to a computer implemented method of food delivery for matching supply and demand of food donators and food receivers. The objective of the present invention to solve problems and adequacies in the prior art related to connecting the food donators and food receivers using digital platform and data processing of the data of the food donators and food receivers.

No. of Pages : 19
No. of Claims : 7
This invention relates to the field of mechanical, electric and computer engineering. This invention relates to a system and method of servicing and recharging a stranded electric vehicle using an EMAV comprising of a Systematic Processes enabled charging framework. The technical advance of the invention lies in providing a one stop solution to provide assistance to a stranded electric vehicle in an efficient and quick manner. The invention consists of a Centralised Control Room (II) which coordinates between the various units namely Centralised Help Desk (1.6); E-Mobility Assistance Vehicle (1.5); Stranded Electric Vehicle (1.3); Automated Device of Technician (1.4); Mobile Device of Customer (1.2); and Electric Vehicle Service and Charging Station (1.9). On a support request from customer, the centralized help desk assigns a technician and EMAV on the basis of Shortest Distance First principle. On reaching, the Technician inspects the vehicle and diagnoses the cause of breakdown: battery issue or mechanical breakdown and accordingly provides the required service, repair or recharge.

No. of Pages : 26 No. of Claims : 9
A composition and method of preparation using the composition for treating a patient in need thereof, the composition comprising an oral formulation with desirable properties of therapeutic agents such as L-Arginine. The composition comprises the therapeutic agent and sodium alginate and other excipients. The therapeutic agent in a polymer matrix results in a microbead for oral administration with potent hepatoprotective activity.

No. of Pages : 20 No. of Claims : 6
A method and system are provided for environmental credit scoring of a plurality of users, partners, and distributors comprising:

- registering the plurality of users, partners, and distributors;
- receiving information from the registered users;
- receiving environmental activity records from partners and distributors;
- assigning each activity an identification number;
- verifying the environmental activity records;
- calculating a score of each environmental activity;
- calculating an environmental credit score of the partners and distributors;
- receiving data from a point of service system;
- identifying the environmental activity records of users, partners, and distributors;
- crediting respective environmental activity records;
- calculating an environmental credit score for the users based on the environmental activities' data credited under the environmental activity record of the users;
- analyzing the environmental credit score of the users, partners, and distributors;
- and publishing the environmental credit scores.
A method for detecting, locating and rectifying localized air leakage in a marine vessel is disclosed. The method comprises mounting an enclosure (100) on the surface of the marine vessel to form an air tight assembly of the enclosure (100) on the surface of the marine vessel to cover the underwater fitting. Further, the method comprises mounting a pressure gauge (111) and a valve (113) on the opening provided of the said enclosure (100) for filling the pressurized air. Furthermore, the method comprises connecting a pressurized air source to the valve (113) for applying a predetermined air pressure in the said enclosure (100) and closing the said valve (113) to cut-off the supply of the pressurized air flow from the source to the said enclosure (100). Moreover, the method includes observing the pressure from the said pressure gauge (111) mounted on the said enclosure (100) for any air leakage based on drop in air pressure after a pre-determined amount of time.

No. of Pages : 21 No. of Claims : 6
The present invention provides an improved toggle clamp for an injection molding machine. The present invention reduces the unwanted oscillations of the toggle clamp in an injection molding machine; increases the productivity of an injection molding machine by providing enhanced control of speed and position to the toggle clamp in injection molding machine. It is an improvement over the existing injection molding machine which eliminates sluggish braking and position overrides by proving controlled speed and positioning of the toggle clamp. Fig. 3a

No. of Pages: 45  No. of Claims: 7
Abstract

A Sugarcane Harvester with Improved Topper Assembly

The present invention relates to a sugarcane harvester and more particularly relates to an improved topper assembly (100) of sugarcane harvester capable of severing upper leafy part of sugarcane stalks and discharging the severed upper leafy part on either side of the harvest area. The said topper assembly (100) comprises parallel twin arms (16, 17) to support said topper assembly (100) by holding the topper drum bracket (14) which follows an arcuate path that houses contra-rotating in running twin gathering drums (1, 2) and includes plurality of V-shaped gathering fins (3, 15). The said parallel twin arms (16, 17) can be vertically adjusted by retracting or extending the said hydraulic cylinder (20) which offers an extended mast that allows severing of upper leafy part of the tallest sugarcane varieties. Fig. 2

No. of Pages : 19 No. of Claims : 7
Abstract A Sugarcane Harvester with Improved Crop Divider Assembly The present invention relates to a sugarcane harvester and more particularly it relates to a sugarcane harvester with an improved crop divider assembly. An improved crop divider assembly comprises inner scroll (2), scroll mounting crown (1), knockdown scroll (3), shoe (4), divider lower bracket (5), divider upper bracket (6), outer scroll (9), a pair of trimmer knives (11), mounting bracket (7) for the trimmer knives (11), driving or geroler motor (8, 12), and a pair of crop divider blades (10). The inner scrolls (2) are equipped with a mechanical treated torsional bars and the pair of blades (10) are installed just an offset to the tangency of inner scroll crop divider. The inner scrolls (2) carries the set of blades (10) and the mechanical treated torsional bars which while rotating does not let the trash wrap around the scrolls due to its close contact between blades and bar contact.
Abstract

A Sugarcane Harvester with Improved Extractor Fan Assembly

The present invention relates to a sugarcane harvester and more particularly it relates to a sugarcane harvester with an improved extractor fan assembly. An improved extractor fan assembly comprises a central metallic hub (25), a top hub (27), a hemispherical shaped bottom hub (23), a hub adapter (29), and aerofoil designed fan blades (31). In order to revive the dead zone, a hemispherical shaped bottom hub (23) is added to hub assembly. The fan efficiency is increased by adding the hemispherical shaped bottom hub (23) such that the same amount of air can be moved at a slower fan RPM which in turn nullifies the dead zone effect by decreasing the dead zone to a point; however, the largest percentage of leaf and extraneous trash is removed while it is moving through the outer-most high-speed annular ring of air.
Abstract A Sugarcane Harvester with Modular Knockdown Assembly The present invention relates to a sugarcane harvester with a modular chain driven knockdown roller assembly (21). The modular knockdown assembly implements single hydraulic motor (2) located at either side of the support arm (18) and covered with motor cover (4). A centered shaft (10) carries shaft sprocket (12) and the hydraulic motor (2) carries motor sprocket (11) at its shaft which transmits the rotational power through drive chain (8) to drum centered shaft (10), where drive chain (8) located inside support arm (18). The single hydraulic motor (2) substantially saves hydraulic energy of whole hydraulic system of machine. The present invention further discloses mechanical control system and method for adjusting orientations of knockdown rollers (21A) for sugarcane harvesters by mechanical linkage (19). Furthermore, the design of modular knockdown roller assembly is in such a way that it eases out task of the technicians to have maintenance at scheduled intervals.

No. of Pages: 24 No. of Claims: 7
A Sugarcane Harvester with Improved Gearbox Assembly of Chopper

The present invention relates to a sugarcane harvester and more particularly it relates to a sugarcane harvester with an improved gearbox assembly of chopper. An improved gearbox assembly of chopper comprises chopper unit (2). The chopper unit (2) includes a gearbox, with input interfaces. The input interface is a broached keyway connector, configured to receive the output shaft of the hydraulic motor (24). The input interface is configured such that the rotational power received at the interface causes the input chopper driving gear (7) to rotate. The chopper driving gear (7) rotate the two main gears (9, 10) and one chopper flywheel pinion shaft (5) that stores the energy through a interfaced flywheel (23) to absorb the load fluctuations received through load surge gained during cane chopping operations. Fig. 1
A Sugarcane Harvester with Improved Basecutter Gearbox Assembly

The present invention relates to a sugarcane harvester and more particularly it relates to a sugarcane harvester with an improved basecutter gearbox assembly. An improved basecutter gearbox assembly comprises a configuration of basecutter gearbox which is depicted as basecutter unit. As depicted, the input interface is a splined connector, configured to receive the output shaft of hydraulic motor. The input interface configured such that rotational power received at interface by one hydraulic motor causes the pinion gear (2) to rotate. The pinion gear (2) in turns rotates the main gear (1) and idler timing gear (3). The idler timing gear (3) then rotates the main gear (4). The said gears used at the base cutter gearbox use an optimum helix angle designed to sustain and alleviates load on each tooth and creates smooth transition of forces from one tooth to the next. Resulting less vibration, wear, noise and longer life.
ABSTRACT MODIFIED STRUCTURE OF BOX GIRDER FOR VIADUCT AND METHOD OF ERECTION THEREOF

Disclosed is a modified structure of box girder for viaduct comprising of a Pre-Stressed Concrete Precast Segmental box girder super structure; rectangular parapets for achieving more compactness to the cross section; wherein the box segments and the parapets are precast integrally and the said box segments are erected in the span and pre-stressed; and wherein there is no walkway on the said parapet and is restricted for front and rear evacuation. Figure (4).

No. of Pages : 21 No. of Claims : 10
An instrument 10 to prepare an intra-uterine device 30 for insertion in uterus 50 of woman, comprising a downfolding device 20, a graduated tube 16, a push rod 17, a stopper 15, and an IUD 30; the downfolding device 20 having a concave depression 41 on either side, an open channel 29 of a circular orifice 46 having a sector of angle measure 46A at least 220° and having an exit opening 48 initially marginally less than an external diameter 22B of the graduated tube 16, a root thickness 37B of the base 37 in-between the open channel 29 such that the exit opening 48 increases by the base 37 flexing; the graduated tube 16 has an internal diameter 22D of a far-end opening 22a of the graduated tube 16 sufficient to capture the stem 33 and both arms 32 of the IUD 30 in a downward triangular formation 51. Figure 3
**Title of the invention:** A MONOLITHIC PULLEY

**Abstract:**

Present subject matter relates to a monolithic pulley (100) including a first gear (102) having a plurality of drill holes (114). The monolithic pulley (100) includes a second gear (104) attached to the first gear (102) by a plurality of pinions (120) and having a plurality of threaded holes (130). Further, a split timing belt area (108) is formed in between the first gear (102) and the second gear (104). A central gear (110) is mounted on an extended sleeve (106) of the first gear (102) and a ball bearing (112) is inserted in between the extended sleeve (106) and the central gear (110). The plurality of pinions (120) is arranged on a periphery of the central gear (110), such that rotation of the central gear (110) moves the second gear (104) forward and backward. Thus, a width of the split timing belt area (108) is varied.
According to this invention, provided improved frame deals with 1) This model provides the benefits of two types of models (commuter & cruiser) that can be combined in one. This will provide optimised comfort for long as well as short distance drives. 2) Due to this adjustment in the frame of 2-wheeler, the cost required for manufacturing 2 different types of product will significantly reduce. 3) This invention will help reduce the use of different 2-wheelers at different occasions thus density of motorbikes on the roads will reduce which will also reduce consumption of fuel. 4) This frame adjustment doesn’t alter or affect the fuel efficiency as the engine specifications are not changed. 5) No External power source will be required for the frame adjustment as power needed by lead screw (41) will be drawn from existing battery.
The present invention relates to a hydraulic device used to rotate a fixture mounted on it at any degree precisely using hydraulic oil by converting linear movement of a piston index into rotational movement, comprising side butting pads which are maintained directly to obtain required angular degree at which said fixture is to be positioned, and a stopper on a step bush index and side butting pads which are maintained to retain said fixture at said angular degree precisely.
The present invention relates to the design and development of theft security system for two wheeler automobiles. The electronic circuit and fuel flow control valve have been designed; which in combination provides a definite solution over prevention of theft of two wheeler vehicles. The supply and flow control of fuel is governed by a dc motor coupled flow control valve by activating ignition system through password protected electronic circuit. The ignition system unlocks by using preset password. When the correct password is entered through key pad, the electronic circuit will trigger a command to switch-on ignition system to drive dc motor coupled with fuel control valve. DC motor will rotate clockwise and open fuel control valve to supply fuel to the carburetor. Similarly, the dc motor will rotate anticlockwise to close fuel control valve to cut-off the fuel supply. The electronic circuit will be defunct without password. Since, the fuel control valve is mounted between dc motor and carburetor, even if the duplicate key is used to activate ignition system or the ignition system is tampered, the dc motor will not operate and hence also the fuel control valve will not operate. That's why there will be no supply of fuel to carburetor and vehicle will not start. The invented theft security system offers dual safety to the vehicle.

No. of Pages : 7 No. of Claims : 2
A motorized scanner for longitudinal (vertical) and latitudinal (horizontal) traversing in the space between two adjacent coiled tubes and circumferentially inspecting the exterior and interior of the tubes - namely economizer, super heater and reheater tubes in a steam generating water tube boiler for any service defects using electromagnetic techniques or sound wave energy techniques and camera systems for in-situ inspection.
Title of the invention: ARTIFICIAL NON-STICK FILM ON TOILETS, URINALS AND WASH-BASINS.

Abstract:
Present invention will be used as an artificial non-stick film on toilets, urinals and wash-basins. It consists of a non-stick film which can be made up of Fluropolymers, Superhydrophobic and Omniphobic materials. An adhesive coating is used to bond non-stick film to the working surface (inner surface of toilet bowls, urinals and wash-basins). When dirt, water, excreta, urine or waste material fall on the inner surface, these do not adhere to the surface and are easily washed away. This is due to the properties of the film which include high water contact angle, low surface energy and low sliding angle. This leads to cleaning of the surface with minimum requirement of water. It prevents scale formation and maintains hygiene in toilets, wash-basins and urinals.

No. of Pages: 15 No. of Claims: 4
The present invention provides for a compound comprising thiazole and pyrazoline derivatives for biological application. The compound possesses chemical name as (3-(2, 4-dichlorophenyl) -5-(4-bromophenyl) -6 phenyl)-3, a, 5, -trihydropyrazolo [3, 4-d] thiazol-2-yl)- (pyridin-3-yl) methanone (IIa). The present invention also provides a combinatorial synthesis process of the compound (3-(2, 4-dichlorophenyl) -5-(4-bromophenyl) -6 phenyl)-3, a, 5, -trihydropyrazolo [3, 4-d] thiazol-2-yl)- (pyridin-3-yl) methanone (IIa). The compound (IIa) exhibits increase in nitrogen percentage in the plants, and enables plant growth and development along with higher protein content in the grain. As thiazole and pyrazoline moieties being used in the combinatorial synthesis of the compound, the compound (IIa) may be used in different biological applications such as treatment of allergies, microbial infections, inflammation, and hypertension etc. FIG.1

No. of Pages : 19 No. of Claims : 5
ABSTRACT

Park a Lot - A System and Method for the Consummate Process of Real Time Parking Space Availability

The invention is to help people for getting the parking slots. It shows the available parking slot for a particular duration in rush hours and availability of overnight stay. The system also keeps the meter down for penalties for the customers who are violating the time. There will be variable charges for peak hours and cool hours, and different types of vehicles. The charges will be fixed and there will not be any discrepancy in the rates. The advance booking of the parking slot can be possible. Slots availability can be decided by the system with the help of artificial intelligence algorithms by using data of the same customer or no. of times any customer tries to opt for that particular time-slot/location/place. The shortest route gets displayed to reach the parking slot. This will also predict the scalability of vehicles in a particular season. This system utilizes unmanned system technology to help parking customers to locate available parking spaces within the parking zones and to provide supervision at the parking facility.
ABSTRACT

SYSTEM AND METHOD FOR REAL TIME HAND GESTURE RECOGNITION

The invention is a real time motion detection using sensors, wherein transceiver is connected to the microcontroller. The proposed technique which is very useful to users for conveying gestures to others. Our system includes motion sensor for each finger and hand, signal processing unit, microcontroller, processing unit and display that is gesture recognizer. The signal processing unit converts raw data into digital data and store it into the memory unit. Microcontroller makes a single frame of the data at transmitting side. At receiver side microcontroller is used to compare the digital gesture pattern with stored pattern. The system aims for hand gesture recognition having two different microcontrollers for processing the sensor data and for recognition of data respectively. The data encodes unique pattern for pattern description by adding security bits. The system has application for maintaining traffic at all junctions. It can be used in small, medium and huge junctions. It is useful in replacing all the traditional hand gesture system and many more.

No. of Pages : 16 No. of Claims : 8
ABSTRACT PANORAMA DEVELOPMENT FOR BLURRED AND NOISY IMAGES BASED ON LIGHT STREAKS METHOD

The invention is basically related to panorama development by Image stitching process in which several pictures or images of overlapping domain of view are blended together to result in a panoramic image of high resolution. The most familiar use of image stitching is in the creation of panoramic photographs, often used for landscapes. Wide-angle and super-resolution images created by image stitching are used in artistic photography, medical imaging, high-resolution photo mosaics, satellite photography and more. For getting the best results, image mosaicking process requires that shots have quite precise overlaps and identical exposure settings. Images taken in low-light conditions with handheld cameras are often blurry due to the required long exposure time. Although significant progress has been made recently on panorama development for blurred and noisy images, state-of-the-art approaches often fail on low-light images with blurred and noisy images, as these images do not contain a sufficient number of salient features that deblurring methods rely on. In this invention, a novel panorama development by using image stitching approach to tackle noisy and blurred image problem has been discussed. Initially acquired images are pre-processed by using light streaks extraction method followed by blurred kernel estimation with light streaks for deblurring the images acquired. The deblurred images are further denoised if there is any presence of in the image. The output of pre-processing step is to get enhanced image with deblurred and noise free. Further the enhanced image performs Image registration process which has five main stages: Feature Detection and Description; Feature Matching; Outlier Rejection; Derivation of Transformation Function; and Image Reconstruction. The main objective of this invention is to introduce a high-quality panorama development by using image stitching process with high registration rate of image key features extracted for image matching process. First, we process the images captured by using pre-processing approach and We utilize combination of image key feature extraction and description and to measure the detection rate of the corrected key points. Second, we perform the implementation of image warping and gradient domain image blending methods to increase the quality of the stitching process. From this invention, we conclude that binary key features extraction and description combined method is the fastest, more accurate, and with higher performance. In addition, light streaks extraction based image enhancement and gradient domain blending method gives the highest stitching quality. Thus, we can develop panoramic image using the process of stitching different images based on pre-processing for low light blurred and noisy image enhancement and approach of image binary key image feature detection and description along with gradient domain blending method gives the better results of panorama.
Title of the invention : SMART CROP DISEASE DETECTION AND TREATMENT SYSTEM

Abstract Crop Disease Detection and Treatment System This invention provides a crop disease detection and treatment system, which comprises a Mobile device, a mobile communication network, internet and automatic crop disease detection and treatment system for crop disease images, wherein the mobile device is connected through a mobile communication network, and the mobile communication network terminal is connected through internet with the automatic crop disease detection and treatment system. Mobile device is used for capturing an crop image so as to obtain disease information of the crops; the automatic crop detection and treatment system comprises a receiving system, transmitting system and automatic disease detection system which is used for receiving the diseased image of crop and transmitting crop disease treatment information and crop disease diagnosis and treatment ; the automatic crop detection and treatment system is used for carrying out diagnosis according to the crop disease image information; after the crop disease image is received by automatic crop detection and treatment system, the crop detection and treatment system is used for carrying out the diagnosis according to the disease image information and sending the disease diagnosis information and treatment to the mobile device through the internet system. According to the crop disease diagnosis system and treatment which are provided by the invention, the timeliness, the convenience and the accuracy of crop disease diagnosing and provide accurate treatment to user.
Title of the invention: SAFETY SYSTEM FOR DRAINAGE GAS MONITORING

Abstract

Safety System for Drainage Gas Monitoring

A safety system for drainage gas monitoring monitors hazards or toxic gases poisoning level in drainage. It helps to give alert when level of gas increased above risk. This system is useful to give alerts to central control room as well as drainage workers, and all related decision maker officers regarding increased level of hazards gases above risk level. Also keeps record of measured hazards or toxic gases and stored in the system. Stored data will be useful to get information of level of hazards or toxic gases in different areas of continent.

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(71) Name of Applicant:
1) SUSHAMA ANATRAO DESHMUKH
Address of Applicant: R H NO. 25, APRATIM VASTU, RENUKA MATA MANDIR ROAD, NEAR CHATE SCHOOL, BEED BYPASS, AURANGABAD - 431005, MAHARASHTRA, INDIA, Maharashtra India

(72) Name of Inventor:
1) SUSHAMA ANATRAO DESHMUKH

(57) Abstract:
Abstract [0054] Patient historic information is very important thing for any doctor if we know the patient history then it became easy for any doctor to give medication to patient easily the automatic patient record management system will work on these above things. To give solution to this problem we provide with a solution of ALL MEDICAL REPORTS/PRESCRIPTION MANAGEMENT SYSTEM which help to maintain record of everyone with every minute details of When, Where, Which All medical reports/Prescription are given to the individual. Also, user will be timely notified about their next dose of all medical reports/Prescription via email/SMS/in app/Software notification. The current invention MTrack: Automatic Patient Record Management System is designed to facilitate both doctors and patient, to manage the appointment and easy to management of patient data. There is no need of booking manual appointment for doctor with this invention.

No. of Pages: 13 No. of Claims: 9
**Title of the invention:** ELECTRICITY GENERATION SYSTEM AND METHOD FOR GENERATING ELECTRICITY

**Abstract:**
ABSTRACT ELECTRICITY GENERATION SYSTEM AND METHOD FOR GENERATING ELECTRICITY

The electricity generation system (100) and method leverages electricity to meet various residential and commercial demands and includes a water source (10), a water lifter (20), a water collector (30), a siphon arrangement (40) and at least one turbine (50) or piezo-plate(s). The water lifter (20) such as a rotating Archimedes screw (21) lifts water from the water source (10). Water collector (30) collects lifted water exited through the water lifter (20). Siphon arrangement (40) is defined with a siphon (41). The siphon (41) lifts collected water and deliver lifted water to a predetermined height within a siphon unit (42). The at least one turbine (50) is disposed such that siphoned water rotates the turbine (50), wherein the rotation of the turbine (50) rotates a shaft in connection with a generator that convert mechanical energy into leveraged electricity. (To be published with Figure 1)
Title of the invention: THE INTELLIGENT CLASSROOM

Abstract:
The Intelligent Classroom ABSTRACT The two main components of a classroom are teachers and students. For a lecture to be effective in terms of education, proper involvement of both students as well as teachers is necessary. In order to enhance the teaching learning process, the behaviour of both teachers as well as students should be comprehensively analysed. The main problem in today's education system is the communication gap, due to which the outcome of teaching learning process cannot achieve its full potential. Our main motivation is to bridge this gap by providing a modern solution by using deep learning. Another problem that is being faced is the tedious task of registering attendance manually. This time could be utilized to deliver important content in the classroom by digitalizing this process.
**Title of the invention:** FUEL TANK OPENING AND CLOSING DETECTION SYSTEM

**Abstract:**
Avoiding the robbery of fuel and securing the business without any losses, a system need to be implemented for safe guarding economical and fuel related losses. This invention will provide stress free environment for the owner of transport companies. It will ensure safety of fuel. As well as providing complete information regarding the location of vehicle which will help the owner to keep an eye on the vehicle without actually creating a mess and confusion between the communication of the owner and the driver. The main objective of this invention is to minimize the robbery and theft of fuel from the fuel tanks. This will result in minimization of economy as well as fuel loss. This will be extremely beneficial for transportation companies. This invention will lead to safe and secure transportation of goods and services.

No. of Pages: 7  No. of Claims: 3
COTTON BOLL LOOSENING AND CLEANING MACHINE

Abstract
Cotton is collected by handpick from the farm and kept in the storage or in owners house before taking to market for sold, it has been observed that in raw collected cotton from field contains nearly 10-15% cotton bolls which are hard in nature and it is very difficult in ginning process to take out seeds from such cotton bolls, also raw collected cotton contains dry sticks and dry leaf sticks and different impurities, it is necessary that to remove all these impurities before ginning, therefore we had design and developed a pre ginning cotton boll loosening and cleaning machine which provide a good quality of cotton for ginning, the machine is designed and fabricated for 55-60 kg/hr production capacity, the experimentation and trial give very encouraging result; machine is processing raw cotton more than the design capacity, impurities like sticks, husk and dust are removed 100% but the dry leaf which is firmly stuck to the cotton boll removed only 50 to 60%, it is not possible beat the cotton very rigorously as it hampered the quality of fiber, this machine is very useful for rural cotton growers farmers by pre cleaning the raw cotton they will improve the quality of cotton and ultimately it is helpful in getting good rate in the market.

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(54) Title of the invention : A SMART HELMET

(71) Name of Applicant :
1) Mr. Upendra Singh
   Address of Applicant : 1-Rehuta gram-Rehuta Tehsil - Rampur Baghelan, Dist. Satna, Madhya Pradesh-485001; Madhya Pradesh India
2) Mr. Mukul Shukla
3) Prof. Sunita Verma
4) Dr. Lalit Purohit
5) Mr. Manjeet Kumar Soni
6) Mr. Ashish Kumar Jain
7) Mr. Neeraj Arya
8) Mr. Chandra Pratap Mandloi
9) Mr. Ravi Yadav
10) Mr. Shani Pratap Singh

(72) Name of Inventor :
1) Mr. Upendra Singh
2) Mr. Mukul Shukla
3) Prof. Sunita Verma
4) Dr. Lalit Purohit
5) Mr. Manjeet Kumar Soni
6) Mr. Ashish Kumar Jain
7) Mr. Neeraj Arya
8) Mr. Chandra Pratap Mandloi
9) Mr. Ravi Yadav
10) Mr. Shani Pratap Singh

(57) Abstract :
ABSTRACT A SMART HELMET A smart helmet (106) for a vehicle (108) having an engine, worn by a driver of the vehicle (108), the vehicle (108) having a wireless communication with the smart helmet (106), the smart helmet (106) comprising a microcontroller (102), a switch (1061) configured to provide a first turn On or turn OFF signal, one or more panic switch (1062), configured to provide a second turn On or turn OFF signal, an alcohol sensor module (1063), configured to sense an amount of alcohol intake by the driver, a light dependent resistor (LDR) sensor (1064), configured to detect a high-beam light of an upcoming first vehicle, a GPS module (1065) configured to detect a location of the driver, a communication module (104) configured to establish communication module (104) amongst the microcontroller (102), the switch (1061), the alcohol sensor module (1063), the one or more panic switch (1062) and the vehicle (108). [FIGURE 1]

No. of Pages : 24  No. of Claims : 7
A system and method for monitoring events in an environment performing surveillance by UAV(s) and managing the same are disclosed in the embodiments herein. Embodiments disclosed herein relate to using at least one Unmanned Aerial Vehicle (UAV), and more particularly to performing surveillance using at least one UAV and providing situational awareness regarding the detected event(s) to at least one external entity. The system is configured to receive, by a plurality of display units an input from at least one second user of the plurality of second users, to tag at least one object associated with the environment in a displayed media. The system is configured to transmit, by the plurality of display units, the tagged at least one object, to a selected at least one display unit of the plurality of display units, for monitoring events of the tagged at least one object associated with the environment. Figure to be included is Abstract FIG. 1
Title of the invention: INDICATION CIRCUIT FOR QUANTITY ASSURANCE OF LPG CYLINDER ALONG WITH EMPTINESS' DETECTION

Abstract: India is the largest consumer of LPG in world after USA and China. Almost everybody uses LPG cylinder for cooking, heating and other applications. Domestic LPG cylinder made of low cast steel which weights 29.5 kg out of which weight of LPG is 14.2 kg and empty cylinder weights 15.3 kg. But the problem is associated with the weight of cylinder to be checked at the time of delivery to ensure correct weight along with its tracking of the inner LPG volume while cylinder is in use. Also we can apply this technique for commercial gas cylinder having weight up to 40 kg and gas capacity of 19 kg.

No. of Pages: 8 No. of Claims: 3
The main purpose of this innovation is to work on the topic which will be useful in today's world for improvement in technologies. There are many fields where all of them are looking to improve the current working system. So, while looking for different topics we found that the head light of newly generated 2 wheelers is continuously on. Due to that the life of bulb and battery is reducing and maintenance cost is increasing. So, to reduce this problem we overcame with this new tiny system. The proposed project work has aimed for developing the feasible low-cost automation technique to make lighting system automatic. We can achieve the reduction in maintenance of batteries and head light. Thus, it is efficient device made, by keeping in mind the increase in maintenance of bulb and batteries due to continuous use of head lights.
ABSTRACT An Equalizing Combi Brake System with Dual Combi Mechanism for Two-Wheelers comprises a front brake lever and a rear brake lever (la, lb) being connected with front brake cable and rear brake cable (C1, C3) first link (L1) being operably connected with front brake lever (la) through brake cable (C1) and said second and third links (L2, L3) said second link (L2) being operably connected with first link (L1) said first link (L1) being integrated with second link (L2) further third link (L3) being operably connected with said front cable (C1) fourth link (L4) being operably connect with rear brake cable (C3) and second and third links (L2, L3) further delay pin (P1) is being mounted at the lower portion of the second link (L2) delay slit (S1) is being also provided on the said second link (L2) said system provides an economical and efficient solution for enhancing braking system.
Title of the invention: INDICATION CIRCUIT FOR WHISTLE COUNT FOR PRESSURE COOKER

Abstract:
This invention will be helpful to prevent the explosion of pressure cooker due to excessive temperature and pressure secondly it will limit the temperature and pressure as per the cooking requirement. This will increase reliable functioning and control of pressure cooker, by adding accessories. It is done by using temperature and motion sensor or combination of both for counting the number of whistle before cut off the gas supply to the pressure cooker.

No. of Pages : 7  No. of Claims : 7
Abstract [0092] An underwater robotic vehicle is to be built which will resemble the structure of a real fish. This vehicle will be semi-autonomous, i.e. it can be remotely controlled by a human and can also dive on its own. The fish can be used for multiple purpose such as underwater surveillance, water tank filtering, capturing images, fish trap etc. As the vehicle will resemble a real fish structure, it will have artificial fins for its movement. The user will have controls for moving the fish calling the fish back to the user position. The fish will use sensors to avoid obstacles with autonomous control.

No. of Pages: 20 No. of Claims: 8
In view of environmental and economical manufacturing processes, dry turning of hardened steel with multilayer coated carbide tool is always preferred in industries. In machining of high hardness steel, vibration of cutting tool incites higher rate of tool wear with bringing down its life. A catastrophic tool failure may occur at any time therefore assessment tool wear is extremely important. The malfunction of machine tools may result in the halt of the whole production and bring about tremendous financial losses. With an effective tool condition monitoring system (TCMS) damages to the machine tool, unexpected downtime and scrapped components can be avoided. Developing tool wear monitoring systems that work in real time and use indirect techniques is the mainstream in automated manufacturing today. Typically advanced TCMS is consist of sensors, signal conditioners/amplifiers, monitor. Sensor is a key element and have to be placed as close as possible to the target location (close to the tool tip) being monitored. Signal processing is then carried out to obtain useful information from the signals received through the sensors. The monitor is display unit used to analyze signal from the sensor. The tool condition monitoring system is developed to predict tool wear while turning AISI 52100 hardened steel of hardness 56±2 HRC. This is widely used for many applications such as bearings, gears, chain parts and spindle, heavy vehicle crankshaft and aircraft landing gears.
The present invention has been projected visible on top of concept, associated an prototypes to produce a yawn determinative equipment and technique, it’s an unique innovation to see the correct yawn state while, not employing a pattern matching. The yawn is state of fatigue for driver and this invention will help to detect this initial warning signs of fatigue and alert the co passenger or driver to a possible mishap due to drowsiness. According to this invention, the air vector coming from mouth during yawning and state of the mouth will be detected by the newly designed excel meter and sound capture techniques, this yawn state supported the gap time within the open state while not victimization pattern matching yawn will determine the state, a determination will be created with high accuracy yawn state this invention is also supplemented by the Alcohol detector mechanism. The present invention, so as to resolve the issues delineate on top of, to see the force of air coming out from mouth, calculate the ratio of the mouth supported the feature points extracted from the mouth pictures enclosed within the face image.
**Title of the invention:** PROCESS FOR THE PREPARATION OF COMPOSITE OXIDANT

**Abstract:**

PROCESS FOR THE PREPARATION OF COMPOSITE OXIDANT

The present invention discloses an industrial scale method of preparing composite oxidant which is compounded with inert support (porous and non-porous) for improving its stability on storage and hydrophobicity. This composite improvises efficiency of oxidation processes giving better yield and purity of the product(s). The process of the present invention is novel, sustainable, technically and commercially feasible, easy and safe to handle.

No. of Pages: 11  No. of Claims: 4
Title of the invention: AN ON-BOARD CHARGING SYSTEM

Abstract: as uploaded

No. of Pages: 28
No. of Claims: 28
A distributed and versatile composite transaction factory (DVCTF) system and method has been described. A modular information system and method utilizing components typically distributed over space for creating and maintaining transactions or for providing transactions as a utility or service. The user (102) creates a transaction on a local computer or a handheld device on which the DVCTF client (104) is installed and forgets. The transaction reflects autonomously on a DVCTF server (106) that represents the transaction processor (TP), including the market, or aggregator of transactions (108) that would be processed by an external system (110), without any further action by the user. The interfaces (112) may or may not represent a conventional distributed computing interface such as Ethernet; thus, it may be a quantum entanglement or some other technology. [Fig 1]
Title of the invention: RECHARGING OR REFUELING STATION LOCATOR (RSL)

Name of Applicant:
1) Monocept Consulting Pvt Ltd
Address of Applicant: 5th Floor, Purva Summit, Survey No 8, Whitefield Road, Hitech City, Hyderabad, Telangana India

Name of Inventor:
1) Gangadhar Heralgi
2) Pranab Das

Abstract:
NA

No. of Pages: 15
No. of Claims: 9
Title of the invention: RAPID DIAGNOSTIC TEST KIT FOR DENGUE, MALARIA AND CHIKUNGUNYA

Abstract:
The present invention provides a multiplex-based test that can detect dengue, malaria and chikungunya infection related immunogenic components (antigens) in a single platform using biological sample from a human subject. The diagnostic kit for the detection of dengue, malaria and chikungunya virus or viral components also form part of the present invention.
Abstract:
Embodiments of the present invention generally relate to exhaust systems of automobiles, for example at least one of motor cycles, bikes and vehicles, thereby facilitating channeling exhaust (or flue) gases emitted as a result of the combustion of fuels, for example at least one of natural gas, gasoline, petrol, biodiesel blends, diesel fuel, fuel oil, and coal, away from a controlled combustion inside the Internal Combustion Engines (ICEs) thereof, and more particularly to a method facilitating managing pollution via deployment of at least one of integral and retrofit proprietary exhaust device in motor vehicle system, thereby resulting in at least one of minimization and zeroization of noise, air pollution as well as maximization of at least one of fuel efficiency and economy in the context of at least one of operation and use of at least one of motor cycles, bikes and vehicles.

No. of Pages: 48 No. of Claims: 4
APPARATUS TO OPERATE SWING WINDOW

Abstract:
An apparatus to operate swing window is disclosed. The apparatus includes a window frame. The apparatus also includes a plurality of windowpanes operatively coupled to the window frame. The apparatus also includes a controlling unit includes a plurality of gears. The controlling unit also includes a thumbwheel operatively coupled to the plurality of gears via a horizontal shaft. The controlling unit is configured to operate the plurality of windowpanes simultaneously, via the plurality of gears, upon operating the thumbwheel by a user. FIG. 1

No. of Pages: 17
No. of Claims: 5
(54) Title of the invention: WATER SAVING AUTOMATIC TOILET FLUSHING SYSTEM

(57) Abstract: ABSTRACT WATER SAVING TOILE FLUSHING SYSTEM An embodiment of the present disclosure provides a water saving toilet flushing method comprising: at least one sensor (109) configured to detect the presence of solid/s in a specific zone (113), at least one light source (111) to light up the specific zone, a mini controller (108), a sufficient power source (112) to efficiently operate the components that it is connected to, an actuator (110) with necessary mechanism to push down a connector (122) to close the flapper valve(103), with necessary audio and visual display for users with special needs. Water saving toilet flushing method is achieved by closing the flapper valve of the flush water tank, once the solid/s along with flushed water leaves the toilet flow channel, thus preventing the excess water flow out into the waste plumbing lines. The presence of solid/s are detected by sensors and when no more solid/s are detected, the sensor/s sends a signal to the mini controller to activate the actuator, and the actuator in-turn pushes down the connector (122) and the connector in turn pushes down the flapper valve, closing the outlet valve of the flush water tank.

No. of Pages: 23 No. of Claims: 16
The invention provides an arrangement for automated monitoring of cerebrospinal fluid drainage. The arrangement includes a portable unit having a cantilever mounted holder for placing a container capable of being filled with the cerebrospinal fluid, a first sensor means mounted below the holder for monitoring the amount of cerebrospinal fluid drained, a second sensor means operably coupled to the first sensor means and positioned vertically above the holder, a control module mounted on the portable unit and configured for transmitting and/or receiving at least one instruction to and from each of the first sensor means and the second sensor means and a communication module operably coupled to the control module for remotely sending an alert related an anomaly in the cerebrospinal fluid drainage. FIG.1
Title of the invention: CLOCK SYNCHRONIZATION OF NODES IN WIRELESS SENSOR NETWORK BY APPROACHING UNITY

Abstract:
The wireless sensor network is a collection of numerous randomly distributed nodes over a wide area. These nodes communicate with each other for data collection, surveillance and tracking. For the communications to take place without collision and for event time stamping, the clocks of these nodes should be aligned to a single time without deviation at any instant of time. The proposed method synchronizes all the nodes’ clocks. The proposed method eliminates the clock offset and clock skew effectively. The proposed method synchronizes the nodes independently without the need of reference clock of the neighbouring nodes. It is easy to implement. The clock time period can be scaled up or scaled down easily.

No. of Pages: 7 No. of Claims: 9
Disclosed herein is a system to predict diabetes using Internet of Things based diabetic prediction model. The system (100) to predict the risk factor of diabetes as shown in FIG. 2 comprises: a first sensing unit (110) including an ultrasonic sensor (112) to determine height of the user, an IR sensor (111) to check the position of the user (140) and an air quality sensor (113) to detect the quality of air, a second sensing unit (120) including a load cell (121) to determine weight of the user, a processing unit (150) including NodeMCU device (152) to calculate the Risk Factor of diabetics using a questionnaire data and sensing data and an user interface device (151) connected with the processing unit (150) to display the risk factor of diabetes.
The present invention discloses a novel optimal design of floorplanning, wherein, the device comprises some of the main parameters such as area estimator, wire length estimator, power consumption reader, and power dissipation reader, which are interconnected with wire to manufacture a single chip. The proposed design of the floorplanning circuit is mainly simplified by means of the logic circuit, update circuit, and switching circuit. The logical circuit simplifies the mathematical calculations for both area and wirelength estimation & the power consumption and dissipations are estimated by means of measurement circuits. The update circuit generates a sequence of the random number after the operation of adding and multiplying the operands, and finally, the switching circuit takes the final decision for producing the floor plan design output. [To be published with Figure 1]
**Title of the invention**: AN APPLICATION PROGRAM INTERFACE FOR GENE EXPRESSION DATA CLUSTERING

**Abstract**:
The urge for DNA microarray technology is inevitable, to overcome the problem of memorization in Genetic algorithm and prevent the effective time of mutant repetition problem, this application program interface holds the most common type of genes and all its associated mutation developed so far so that Gene Expression Data Clustering concurrently monitors the expression levels of selected gene's, that is one and only new mutation rather than the already discovered mutation of that particular gene. Gene Expression Data Clustering is done through an Advanced Nelder Mead (ANM) algorithm, to reveal natural structures and identify interesting patterns in the underlying data were the vertices of a triangle are considered as the solutions. The global search the pre discovered mutation and the spread-out operation gives three points and the best point is replaced with the worst point. Finally the best fit the new mutation for a specific gene is discovered.

No. of Pages : 11 No. of Claims : 6
(54) Title of the invention: SYSTEM AND METHOD FOR REMOTELY MONITORING A FUEL TANK

(51) International: B60K0015040000, G05B0015020000, G01F0023260000, F02M0025080000, B60K0015030000

(31) Priority Document: NA

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No : NA

(61) Patent of Addition to Application: NA

Number : NA

Filing Date: NA

(62) Divisional to Application: NA

Number : NA

Filing Date: NA

(57) Abstract:

SYSTEM AND METHOD FOR REMOTELY MONITORING A FUEL TANK ABSTRACT: A system and a method for remotely monitoring a fuel tank is provided. The system includes a fuel level sensor operatively coupled to a fuel tank of a vehicle, wherein the fuel level sensor is configured to sense level of fuel available in the fuel tank. A processor operatively coupled to the fuel level sensor, wherein the processor receives sensed data representative of level of the fuel available in the fuel tank from the fuel level sensor; and identify the level of the fuel available in the fuel tank by comparing the sensed data with at least one of predefined level of fuel and previous sensed time with current sensed time. A notification module generates and transmits a notification to an individual based on compared data. A fuel cap is remotely operated by the individual based on the notification received by the individual. FIG. 2

No. of Pages: 19 No. of Claims: 10
Title of the invention : ARTIFICIAL INTELLIGENCE BASED HEART DISEASE PREDICTION WITH NOVEL HEART FUNCTIONALITY PATTERN

Abstract :
The present invention discloses a novel heart functionality pattern for heart disease prediction, wherein the system comprises the patients with different attributes, which undergoes the process of feature extraction, and also includes the intelligent model, pattern generator, and novel pattern to predict the informative heart disease. The system of the present invention is to generate a heart functionality pattern to aid in predicting the heart disease of the patient. The different attributes of the heart patients can be predicted by means of smart mobile application, smart band, and third party measurement app, in which the smart mobile application determines the patient™s age, gender, height, weight, and chest pain, whereas the smart band tracks the pulse rate, socio-economic behaviour, and activities of the patient, and finally the third party measurement application calculates the patient™s blood sugar level, smoking range, food habits, personal records, and hemoglobin range. [To be published with Figure.1]
The present invention relates to the development of hydrogel in the field of tissue engineering which is a combination of Chitosan, Moringa oleifera and Trigonella foenum-Greacum. It precisely aims to enhance the cell proliferation of osteoblast-like cells in-vitro. It particularly relates to hydrogel formulation with combination of Chitosan, Moringa oleifera and Trigonella as a potential implant surface treatment scaffold. More specifically, it relates to hydrogel formulation with combination of Chitosan, Moringa oleifera and Trigonella as a potential implant surface treatment scaffold is promoting and shortening of osseointegration time with quicker, stronger and predictable bone formation, ensuring better stability and thereby allowing implant placement with more freedom and extentivity. This invention also relates to the the process for preparation of hydrogel formulation with combination of Chitosan, Moringa oleifera and Trigonella as a potential implant surface treatment scaffold.
A device for reaping fruit on a tree is disclosed. A set of sensors configured with the support frame to sense one or more attributes associated with the fruit, a retractable cutting arm configured with the support frame. The control unit to determine a distance between the retractable cutting arm of the device and the fruit by extracting a first set of attributes from the sensed one or more parameters compare the determined distance with a predefined threshold, wherein based on the comparison if the device is within an optimum distance from the fruit, the retractable cutting arm is extended to enable reaping of the fruit, and wherein based on the comparison if the device is not within the optimum distance from the fruit, at least the pair of arms are configured to facilitate the device to move within the optimum distance. Fig 1A.
A methodology and a device to detect the efficient vein for IV cannula insertion using image processing techniques is a user-friendly technique to identify prominent veins and prick the particular vein painlessly. The proposed invention includes a local anesthesia that will be displaced on the pricking surface once the device identifies the prominent vein that supports the free flow of IV Fluids through the vein. It is a tedious task for nurses or doctors to get the efficient vein when the patient is hospitalized and treated with IV Fluids. When the patient is dehydrated, the veins will not be visible which will result in multiple painful pricks. The invention includes lights to image the veins and pattern recognition techniques will prick the vein and indicate the nurse through a green LED Light that the IV Cannula insertion procedure has been completed.

No. of Pages: 21
No. of Claims: 8
Title of the invention: AN EFFICIENT HORIZONTAL TO AND FRO SYSTEM FOR PARAPLEGIC PATIENT BASED ON ELECTRICAL STIMULATION

Abstract:
An efficient horizontal to and fro system for paraplegic patient based on electrical stimulation is the proposed invention which aims at designing a system to treat the paraplegic patients efficiently in cost-effective manner. The invention has shown faster and better results when compared to conventional physiotherapy treatments. Also, the present invention is user-friendly and cost-effective to be used by a common man. The system includes an alert system to cease the mechanism of the entire system in case of emergency. The pulse oximeter and the ECG machine connected to the patient will help to monitor the health parameters of the patient continuously and thus reducing the risk associated with it. The horizontal to and fro motion of the patient, the crawling position is the best technique to strengthen the lower extremity of the paraplegic patient.

No. of Pages: 25 No. of Claims: 9
Title of the invention : ARTIFICIAL INTELLIGENCE ENABLED BOT FOR RAILWAY TRACK CLEANING

Abstract :
India positioned second largest railway transportation sector in Asia covers approximately 66,687 kms of route length with 11,000 trains. Indian railway faces massive challenge to manage waste overthrown on the railway tracks. The wastes been generated from various sources including station stores, disposal of food wastes from pantry and human faeces. Tainted railway tracks and stations spread various diseases to its passengers, workers and people living nearby tracks and stations. No technologies have implemented to clean the waste left over on the railway tracks. As of now, the Indian railways depend on manual scavenging process by collecting wastes. This type of cleaning is not advised since it spoils scavenger’s health. The current situation can be resolved by implementing automated technology with the help of artificial intelligence supported machine. In this invention, a novel low cost less weight bot machine is introduced to clean the wastes overthrown on the railway tracks with the help of trained cameras. This invention is specially designed for the Indian railways to meet the quality expectations. This camera trained by novel algorithm to identify particular wastes available on the tracks. This bot consists of four wheels electrically driven wheel to move the bot. A high power blower used in this bot sucks wastes which is identified by the trained camera and send to collector. The GSM and GPS module makes this bot as automated machine to avoid human intervention.

No. of Pages : 8 No. of Claims : 7
A mobile ad hoc network consists of wireless hosts that may move often. Movement of hosts results in a change in routes, requiring some mechanism for determining new routes. Several routing protocols have already been proposed for ad hoc networks. This invention suggests an approach to utilize location information (for instance, obtained using the global positioning system) to improve performance of routing protocols for ad hoc networks. By using location information, the proposed Location-Aided Routing (LAR) protocols limit the search for a new route to a smaller request zone of the ad hoc network. This results in a significant reduction in the number of routing messages. Two algorithms are presented to determine the request zone, and also suggest potential optimizations to our algorithms.
Title of the invention: A NOVEL WEEDICIDE FORMULATION FOR THE MANAGEMENT OF WATER HYACINTH (EICHHORNIA CRASSIPES)

Abstract:

The present invention discloses a novel, simple, synergistic, adjuvant-free, cost-effective and environmentally benign weedicide formulation, for rapid management and complete disintegration of the pernicious and invasive weed Water Hyacinth (Eichhornia crassipes). The weedicide formulation of the present invention comprises of synergistically effective amounts of characterized combination of Acetic Acid and Butyric Acid in a characterized ratio in which the weedicide formulation does not demand any adjuvants, as presence of two mild organic acids is capable of wetting and penetrating into plant surfaces instantaneously despite waxy coating over leaves. The present invention also discloses process of preparation of novel, simple, synergistic, adjuvants free, cost effective and environmentally benign weedicide formulation. The present invention further discloses method of rapid management and complete disintegration of pernicious and invasive weed Water Hyacinth.

No. of Pages: 20 No. of Claims: 8
Title of the invention: AGAR BLOCK CUTTER DEVICE FOR SLIDE CULTURE METHOD FOR FUNGI

Abstract:

The present invention discloses an Agar block cutter device to precisely cut square blocks of agar-based solid culture media in petri plate for fungal slide culture technique, without using measurement tools thereby overcoming demand of technical skill for measurement such as length measurement scale, marking pencil and marking grid and also reducing risk of petri plate contamination. The Agar block cutter device of the present invention comprises of a metal handle and a 24 gauge Nichrome wire. The metal handle is of predetermined dimensions and has lower end and upper end. The lower end is insulated for holding and the upper end is threaded and adapted to fit a screw of predetermined dimension. The upper end is also provided with a groove to accommodate the Nichrome wire in which the screw when tightened secures the wire at the upper end of the metal rod. The 24 gauge Nichrome wire comprises of a stem of predetermined dimensions and a square shaped loop of predetermined dimension. The stem is adapted to fit with the handle in the groove and the square shaped loop lies at a perpendicular plane to that of the stem and the handle. The square loop is triangular in cross-section with pointed edge facing upward which is opposite to the stem and the handle for allowing precise cutting of agar blocks of required size when square end is plunged in agar media, without use of accessory tools for measurement such as length measurement scale, marking pencil and marking grid.
TITLE: MOUTH MIRROR WITH PERIODONTAL FLAP RETRACTOR

APPLICANT: SRI BALAJI VIDYAPEETH & INDIRA GANDHI INSTITUTE OF DENTAL SCIENCES

ABSTRACT

TITLE: TRI-TIP UNIPETTE (T-TUP)

TITLE: SYNTHESIS, CHARACTERIZATION AND STUDY OF CYTOTOXICITY OF THERMOTROPIC LIQUID CRYSTALLINE POLY(ESTER-AMIDES) CONTAINING 2,6-BIS(3-METHOXYBENZYLIDENE)CYCLOHEXANONE MOIETY IN THE MAIN CHAIN.

APPLICANT: KAVITHA ERRA KALAPPA

ABSTRACT

The present invention discloses a process of synthesis of antibacterial and anticancer activity exhibiting thermotropic liquid crystalline poly(ester-amides) possessing 2,6-bis(4-hydroxybenzylidene)cyclohexanone moiety in main chain and products thereof. Five thermotropic liquid crystalline poly(ester-amides) were synthesized by polycondensation method. The poly(ester-amides) were synthesized from varying dicarboxylic acids with a common diamine namely 4,4'-diamino benzene and a common diol namely 2,6-bis(4-hydroxybenzylidene)cyclohexanone. For qualitative characterization, viscosity measurements and solubility data were used for these synthesized poly(ester-amides). The spectroscopic techniques such as FT-IR, 1H NMR, 13C NMR were performed to investigate the microstructural features of these synthesized poly(ester-amides). The thermal phase transition behavior of these poly(ester-amides) were studied by Differential Scanning Calorimetry (DSC) and Hot-stage Optical Polarized Microscopy (HOPM). The degree of crystallinity was assessed by X-ray diffraction (XRD) patterns. Scanning Electron Microscopic (SEM) technique was used to illustrate the morphology of these poly(ester-amides). The synthesized copolymer was subjected into in vitro anti-cancer activity studies against human breast cancer (MCF-7) cell line and also these copolyesters displayed potential bactericidal activity against pathogenic bacteria.

No. of Pages : 32 No. of Claims : 6
Profile cutting on the ceramic tile is a challenging task for the tiles laying workers with perfection. So we developed a simple mechanism to mark and scribe the profile on tile surface. The available cutting machines in market are for horizontal or vertical and hole making only. This mechanism consists of a base bed and a rotating knob screw along with a collapsible linkages as well as a tool bit and its holder. To obtain a linear movement and scribning, a sliding beam with a collar arrangement is given. The required profile is obtained by adjusting the collapsible linkage and the rotating knob through scribning with a tool bit. This mechanism makes the worker as portable, compact, no electricity required and quicker in profile cutting process.

No. of Pages : 5 No. of Claims : 7
Military and Space fields both face different problems. During a war the Military finds it difficult to inspect in a close range and in Space there is no proper wheel and body design to provide suspension and move properly. Therefore, our solution is our very own project MILACE BATRA. Its main feature is that it uses Ni-Ti alloy tyre to provide super suspension and it can inspect war or enemy military bases in any direction, i.e. 360 degrees. It can also detect mines, missiles and other explosives. It uses Hyperloop body design and is impossible to hack as it has a separate Wi-Fi IP address. It also detects signs of life, i.e. it detects if a person is alive or dead.

No. of Pages : 5  No. of Claims : 5
### Abstract
Accidents involving fire cause unimaginable devastation which annihilate and obliterate everything in the vicinity. The principal and prevalent technology and techniques are almost obsolete with their own attendant inconveniences. The complications are assorted and compounding in style. Dousing the fire poses challenging situations. Cramped as well as hedged space, near inaccessible reach to the origin of fire, availability of water sources and hazards in the use of CO2 are conspicuous hurdles. The customary technology is perilous. While the toxicity and the residual remains, for instance, in the case of chemical based fire extinguisher portend menacing outcomes, water is unusable in freezing temperatures in addition to its vulnerability as a conductor of electricity. The obvious cases are space stations and submarines demanding the newest technology. The search for alternative solution led to the use of sound wave as a prospective and potential weapon for smothering the fire which eliminates almost all the inadequacies of the conventional methods. Designed as an automatic auditory fire smothering technique, this technology has three core conceptual designs - temperature sensor to detect fire, flame sensor to uncover flames and IR sensors for the detection of obstacles.

No. of Pages : 7 No. of Claims : 7
A SYSTEM AND METHOD FOR REVIEWING A PRODUCT OR SERVICE

ABSTRACT

A system for reviewing a product or service is provided. The system includes a review receiving module that receives one or more selections of positive parameters and negative parameters about the product, from users. A review quotient computing module computes an aggregate value for each of the positive parameters and each of the negative parameters using one or more received selections; ranks the positive parameters and the negative parameters based on the aggregate value computed for each of the positive parameters and each of the negative parameters; computes a positive aggregate value and a negative aggregate value based on top-ranked positive parameters and top-ranked negative parameters, respectively; determines a review quotient by computing a ratio between the positive aggregate value and the negative aggregate value; and compares the review quotient determined with a predefined threshold value. A recommendation module recommends new users to purchase the product based on the review quotient. FIG. 2
FDML-FITNESS: FITNESS FUNCTION DERIVED USING MACHINE LEARNING AND DEEP LEARNING.

A method for using machine learning and deep learning to solve complex problems having either an approx +positive result (the event occurred) or a approx -negative result (the event did not occur), in which the modern probability of a approx positive result is very low and the consequences of the positive result are significant. The training and testing data is obtained and a other set, subset of that data is distilled for application to a deep learning system. The training, testing data includes various records corresponding to the positive result, some nearest neighbors from the records corresponding to the negative result, and some other records corresponding to the negative result. The machine learning, deep learning system uses a co-evolution approach to obtain a rule set for predicting results after a number of cycles. The FDML-Fitness uses a fitness function derived for use with the type of problem, such as a fitness function based on the sensitivity and positive predictive value of the rules. In this prediction the fitness function data is fully mapped in Indian human only.

No. of Pages : 19
No. of Claims : 4
OP-Detection: Objects Path(OP) stored in computer's memory include a directed graph of object directories

The objects stored in computer's memory include a directed graph of object directories. Each object directory stores object names and object pointers for locating and accessing other objects. A root directory object, which is the starting point for locating any specified object, stores object names and object single pointers to a set of first level object directories. Each object has an associated pathname that defines a path through the directed graph of object directories for accessing that object. Each pathname is a succession of path elements, proceeding from a first path element, second path element to a last path element. A default pathname parsing procedure is used for parsing any specified object's pathname, starting with said first path element, until the default pathname parsing procedure accesses an object directory having its own distinct pathname parsing procedure. At least one object directory has its own distinct pathname parsing procedure for locating objects whose pathname includes a path element that identifies that object directory. When parsing a specified object pathname, the path elements are successively parsed, one at a time by accessing the corresponding object directory, and then using the information in that object directory to access the object or directory object associated with a next path element. When an object directory is accessed that has its own pathname parsing procedure, that object directory's pathname parsing procedure is invoked to parse the remaining path elements of the specified object pathname.
Title of the invention: DESIGN OF HEALTH CARE NETWORK ARCHITECTURE FOR DISSEMINATION OF E-HEALTH RECORDS USING BLOCKCHAIN TECHNOLOGY

Abstract:
Health Care information is sensitive in nature and thus must be saved so as to guarantee the protection of patient™s health information. In any case, the storing of these in a cloud in healthcare applications is making these powerless against digital assailants and attacks. This requires the decentralization of authority over the database. Blockchain innovation is a potential possibility for this by utilizing the blockchain technique in medicinal services applications, the integrity and responsibility of the utilization of these applications can be guaranteed. In any case, blockchain structure represents a few concerns, for example, latency, high overhead and low output in IoT applications. This requires the alteration of the great Blockchain structure to beat its difficulties. This paper displays health care engineering, which uses modified Blockchain innovation to achieve the protection of the patient's information.
Learning accuracy is improved by practicing multiple parties™ collaboration that conducts back propagation jointly with neural network that combines the data sets from both. None of the party discloses the private data during this process to other parties. This type of collaborative learning is supported by the existing schemes that are limited in the partition of data or by considering only two parties. Collaborative learning conduction is done by the partitioned data set allowing two or more parties lacking the solution. This invention solves the problem by using the cloud computing power. Private data of each party is encrypted locally and uploaded in the cloud with its cipher texts. Operations involved in the learning algorithm are executed by the cloud over the cipher texts without the knowledge of original data of a private party. Expensive operations are offloaded securely to the cloud for minimizing the communication and computation cost. Flexible operations are supported over cipher texts by the encryption algorithm.
Title of the invention: SMART GARMENT FOR MEDICAL TEXTILES

Abstract:
The aim of our project is to develop an apron suitable for medical environment. In this project, a HEMT innovative apron has been designed and fabricated with the wireless network application for the patients. This device is useful to monitor the patient's heart beat rate, ECG, movement, and temperature [HEMT]. We will learn the concepts behind the application of wireless networks in the medical field and the manufacturing of aprons. Smart textiles represent the next generation of textiles for use in several fashion, furnishing and technical applications. The introduction of smart materials and computing technology in textile structures offers an opportunity to develop textiles with a new type of behavior. This report aims to provide an overview of projects combining smart textiles and clothing as a basis for future discussion on how smart textiles are introduced into the fashion. There are three possible developments in smart aprons. The first is the introduction of a new type of textile fibers, and the second is the miniaturization of electronics and the third is different kinds of wireless technologies. One of the pioneering projects was the 'wearable motherboard' which the garment with integrated sensors. Health monitoring is a general concern for patients requiring continuous medical assistance and treatment. Smart aprons play a growing role in these developments since they are well suited for wearability that ensure the comfort for the user.

No. of Pages: 5 No. of Claims: 7
TRANSFORMATION OF ELECTRIC MOTORCYCLE FROM SCRAP

Abstract:
Electric vehicles are in great demand in our existing society since there is a developing hike in the fossil fuels, while these fossil fuels are highly air pollutant. The proposed innovative project is a smart Electric Motorcycle made from scrap which is an eco-friendly, pollution free transportation instrument and uses electric power driven by a motor drive for the vehicle's movement. The project has been designed to run an average range of 70-80 km for a single time charging, which requires only 3-4 hours against the existing charging time of 5 hours. It provides a speed of 35-40 km/hr which is a safe mode of transportation. We claim to save the energy from bike appliances with the help of a dynamo, thus it does not disturb the range of the vehicle. Hence it can be used to provide a high efficiency, pollution free and a safe ride. It is equipped with an additional storage carrier at the tank case and a comfortable driver position which suits for a comfortable long drive. An emergency charging of 30 minutes can provide a range of 15 km and it is made of an inbuilt charger. Hence, there is no need of additional portable charging unit. The proposed electric motorcycle is enabled with a brand new design and made smart with modern aids to satisfy the needs of people and it was tested on ground by the Regional Transport Officer of Salem (West). Hence it provides a revolutionary change in the transportation sector with enhanced features and cost efficiency.

No. of Pages: 5
No. of Claims: 7
Abstract:
The invention relates to a suite that incorporates modern equipments to monitor the essential features of the fetus in the womb. The modern suite is made up of an elastic rubber or cotton in the form of a belt that is worn around the waist of the pregnant women to periodically monitor the vital features of the fetus through the one or more sensors, to store and to wirelessly transmit the said data of the baby in the womb to the health care units at regular intervals for the assessment of the fetus and mother health conditions from remote site, to remind the pregnant women regularly about the intake of liquid diets such as water and health drinks, consume nutritious foods and to perform physical exercises for a healthy baby and mother, to provide power to the various units of the said suite. To achieve the objective of the invention, the suite to assist pregnant ladies and to continuously monitor the fetus growth in the womb comprises a garment with multiple provisions for accepting plurality of units to be worn around the waist of the mother with the said units placed under the belly; a controller with pre-programmed information for periodically intimating the suite wearer about executing the essential activities; a plurality of detectors for detecting the vital features of the fetus inside the womb; a wireless communication module for transmitting the said detected information to the medical care unit and an energy source for supplying power to the multiple units placed inside the said suite.

No. of Pages : 25 No. of Claims : 12
The present invention relates to the field of IoT based mobile storage rack. A smart storage rack (1) comprises of a locking station (11), an electronic card (22), cloud (31) and plurality of checking station (41) wherein said station (11) comprises of visual capturing means (15), tag module (16), light detecting means (17) and control unit (18), said locking station (11) is connected to the checking station (41) through cloud (31) and wireless communication means (19) (44). Fig 1.
Title of the invention: A RELAY FOR A DISTRIBUTED SOFTWARE DEFINED NETWORKING (SDN) CONTROLLER

Abstract:
ABSTRACT A RELAY FOR A DISTRIBUTED SOFTWARE DEFINED NETWORKING (SDN) CONTROLLER The present disclosure relates to the field of computer networks and discloses a relay (102) for a Software Defined Networking (SDN) controller. The relay (102) is configured in a control plane (50) of a software defined network (100) for extending the scalability of the network (100). The relay (102) comprises an Internet Domain Socket (IDS) which is configured to establish connection with at least one other controller (Sn0, Sn1,......, Sni). The Internet Domain Socket (IDS) is further configured to maintain the established connection, thereby extending the scalability of a data plane (60) and the control plane (50) of the network (100). Further, the relay (102) includes a Unix Domain Socket configured to monitor a plurality of parameters associated with the data plane (60) of the extended network (100). Fig 1.

No. of Pages: 25 No. of Claims: 8
Title of the invention : IOT BASED SOLAR POWERED POTTERY WHEEL

Abstract :
Everyone is looking out for the technologies which enhance their operating environment. Internet of things are rapidly becoming increasingly available, accessible and importantly affordable. IoT is the addition of artificial information to one or more of the senses that allows the user to perform tasks more efficiently. Still now the potters usually making pots with a help of handy rotated pottery wheel and AC powered pottery wheel. To overcome the disadvantage of this method we have proposed a system to decrease the manpower, to reduce the debit they want to pay monthly for electricity and to decrease the cost of machine. In our proposed solution the pottery wheel is rotated with the help of DC motor which is drive by the battery and the battery is charged by the solar panel, as an innovation this system has an IoT circuit to measure the speed of motor and voltage of battery. All those data can be monitored for 24 hours by the user and the manufacturer. So that, both manufacturer and the customer will be satisfied.

No. of Pages : 16 No. of Claims : 6
Title of the invention: VEHICULAR NETWORK SYSTEM OF ROAD SIDE UNIT (RSU) FOR MONITORING TRAFFIC INFORMATION USING MULTI-PATH RECOGNITION

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<th>(51) International classification</th>
<th>(54) Name of Applicant:</th>
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<td>H04W0084180000,G08G0001090000,G08G0001160000,G08G0001096700,H04W0028080000</td>
<td>1) Dr. Rajkumar Kulandaivel</td>
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<td>(31) Priority Document No</td>
<td>(32) Priority Date</td>
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<td>(71) Name of Inventor:</td>
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<td>1) Dr. Rajkumar Kulandaivel</td>
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<td>2) Dr. Rizwan Patan</td>
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<tr>
<td>3) Dr. Prassanna Jayachandran</td>
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<tr>
<td>4) Mr. Hariharan Kalyanaraman</td>
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<tr>
<td>5) Dr. Manikandan Ramachandran</td>
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Abstract:
Present invention is related to a vehicular network system of road side unit (RSU) for monitoring traffic information using multi-path recognition. The objective of the present invention to solve problems and inadequacies in the prior art related to monitoring traffic information using multi-path recognition in vehicle ad Hoc network.

No. of Pages: 22 No. of Claims: 6
Structure of the hydraulic jack is manufactured by comprising of base framework, arrangement of apparatuses and component of wrench constrained by android by Bluetooth association. The motor fueling the model works upheld the 12V battery acquired through vehicle adjusted from a tractor. The component of lifting is finished by the motor with the apparatus framework. The valve of the hydraulic jack is bolted just by squeezing the remote for lifting a gear. The lifting activity begins once the remote is squeezed again whose tallness is balanced bolstered the release valve. Physical exertion for lifting the vehicle is that the present issue by the hydraulic jack. Regular hydraulic jack requires more vitality for working which can't be worked in lopsided surface especially by ladies. The outfitting proportion and along these lines the torque for building up the development are dissected for fusing remotely by android application. Testing is managed which decides the adequacy of lifting loads one ton, two ton, three ton, four ton and five ton. The drudgery is overwhelmed by the arranging shielding from wounds and musculoskeletal issues expanding the practicality with the cultivating productivity perform support work with diminished size.

No. of Pages : 14 No. of Claims : 6
My Invention IDDP- Structure Algorithm: You know the biggest difficulty for Indian crops is that pests interfere with their roots and leaves. Plant diseases cause great damage to crops and economic losses. Through early diagnosis, it reduces plant diseases, improve production effect, is necessary to decrease plant diseases. Large crops are wasted every year due to the rapid infestation of pests and other insects. Diagnosis is really difficult for infected cotton plants, the cause is the symptoms of various diseases. In this invention, we used a new technique to identify the types of pests in cotton plants. Images of leaves affected by certain diseases are first preprocessed, as structure algorithm. The image is detected by the body looking for edges, enhanced. Images detected by the edge provide fuzzy k-means clustering for segmentation. Then, the multi color features are extracted, correlation, entropy, texture features such as energy, contrast, edges, etc. are extracted from the leaf image, and then compared with the ordinary cotton leaf image. Finally, the exact disease decision and medical related diagnosis will be displayed. Later the detected disease will also give with a solution of medical diagnosis for the disease.
UNIVERSAL TYPE AIR PROPELLED SYSTEM FOR BOATS

A system to propel boats comprising the prime mover (5), where the prime mover output is connected to power shaft transmission pulley and to the lower arm of the chain drive (6). This lower arm is connected by means of double sprocket chain drive to the propeller shaft pulley which is connected to the upper arm of the chain drive pulley. The one end of the upper arm support is connected to the chain drive (6) and the other end is attached to the propeller (1) which creates the thrust for moving the boat (100). Main Illustrative Fig: 1
we present the design and construction of a mini-robot for chloride chemical detection. A mini-robot system, able to detect chloride and absorb and store it in a tank by itself, was carried out successfully. Also, this application recipes a signal when the mini-robot has detected an area of chloride concentration. The chloride chemical concentration for its detection is established in the control system, and this can be modified according to user needs. The communication between the remote device and the mini-robot system was carried out by means of wireless protocol radio frequency. The results show the effective implementation of this kind of mini-robot system, it has advantages such as: low cost, small, simple, and it uses a mobile device.
A new stent design with varying geometry and thickness is proposed to ensure an uneven expansion of the stent to avoid its failure caused out of high stresses from thick section of uneven plaque maturation. This new stent design can also prevent the rupture of thin section of the artery possessing non-uniform plaque maturation. The new proposed stent design combines the general stent structure with the invented stent structure wherein the expansion is greatly minimized by altering the geometry and, as well as the thickness, in a section of the total stent structure. The invented stent design also restores partially the tubular axis of the blood flow inside the artery through non-uniform radial expansion of the stent without any external stimulant.

No. of Pages : 22
No. of Claims : 4
The present invention discloses a process for extraction of pesticidal and larvicidal property exhibiting with 100% mortality against the 4th instar larvae of Aedes aegypti larvae, bio-active compounds, 2-(dec-2-enyl)-3-methyl quinolin-4-ol-C20H27NO (PA-1) and 7-amino-N-methyl phenazine-1-carboxamide-C14H13N4O2 (PA-2) from Pseudomonas aeruginosa KUN2 Acc NO: KR025536. The extracellular culture filtrate of the Pseudomonas aeruginosa strain KUN2 isolated from the rhizosphere soil from Nallurvayal Coimbatore were extracted with the solvent petroleum ether to separate out the secondary metabolite from the strain was and bioassayed against the Dengue vector Aedes aegypti showed 100% activity with in 24hrs duration of treatment. Further the bioactive compound were fractionated using analytical technique and bioassayed each fraction separately against the Aedes larvae. Fraction with 100% mortality were analysed for the identification of bioactive compound using analytical techniques. Two larvicidal compounds 2-(dec-2-enyl)-3-methyl quinolin-4-ol-C20H27NO and 7-amino-N-methyl phenazine-1-carboxamide-C14H13N4O2 were identified.
The Patent Office Journal No. 10/2020 Dated 06/03/2020

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(54) Title of the invention : ISC-BLOCK CHAIN CONTROL: BLOCK CHAIN INFRASTRUCTURE AND SMART CONTRACTS CONTROL

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(71) Name of Applicant :
1)Dr. N.SUTHANTHIRA VANITHA (PROFESSOR IN EEE)
Address of Applicant :MUTHAYAMMAL ENGINEERING COLLEGE (AUTONOMOUS), KAKKAVERI, RASIPURAM, NAMAKKAL DISTRICT, TAMILNADU - 637408 PAN Card: CKGPS3114P Tamil Nadu India
2)Dr. P.SURESH (PROFESSOR IN MECHANICAL ENGINEERING)
3)Dr. N.SARAVANAN (PROFESSOR IN BIOTECHNOLOGY)
4)Dr. R.THANIGAIVELAN (PROFESSOR IN MECHANICAL ENGINEERING)
5)Dr. S.VIJAYARAGHAVAN
6)Dr. S.SUNDARAM (PROFESSOR IN MECHANICAL ENGINEERING)
7)T.ARAVIND (ASSISTANT PROFESSOR IN CSE)

(72) Name of Inventor :
1)Dr. N.SUTHANTHIRA VANITHA (PROFESSOR IN EEE)
2)Dr. P.SURESH (PROFESSOR IN MECHANICAL ENGINEERING)
3)Dr. N.SARAVANAN (PROFESSOR IN BIOTECHNOLOGY)
4)Dr. R.THANIGAIVELAN (PROFESSOR IN MECHANICAL ENGINEERING)
5)Dr. S.VIJAYARAGHAVAN
6)Dr. S.SUNDARAM (PROFESSOR IN MECHANICAL ENGINEERING)
7)T.ARAVIND (ASSISTANT PROFESSOR IN CSE)

(57) Abstract :
ISC-BLOCK CHAIN CONTROL: BLOCK CHAIN INFRASTRUCTURE AND SMART CONTRACTS CONTROL. ABSTRACT My Invention • ISC-Block Chain Control • A method and system to use a block chain infrastructure and smart contracts to monetize data transactions involving changes to data included into a data supply chain and management. The invention ISC-Block Chain Control • describes a system and method to use Intelligent/smart contracts to monetize changes to data using a blockchain infrastructure. The system and method matches a data producer's data with a data buyer's specifications, and enables micropayments for changed data responsive to observation of changes to data included into a data supply chain on a granular level. The implementation of blockchain infrastructure for data transfer enables a advanced class of business Technology™s that enables the maintenance of privacy of personal information while giving access to actionable data and implementing a fair and transparent market for data producers and data buyers to use redundant distributed ledgers of transactions on peer to peer networks. The System and method for executing cryptographically secure transactions in a network comprising a public ledger, comprising associating a first proposed transaction with a public keys smart contract and associating at least a second transaction including private data and public data in said network with a cryptographically secure transaction.

No. of Pages : 26 No. of Claims : 9
Title of the invention: IOT-DEVICE CONFIGURED: AUTOMOTIVE INTERNET OF THINGS (IOT) DEVICE CONFIGURED WITHIN A CAR COMPRICES

Abstract:
IOT-DEVICE CONFIGURED: AUTOMOTIVE INTERNET OF THINGS (IOT) DEVICE CONFIGURED WITHIN A CAR COMPRICES. ABSTRACT My Invention IOT-DEVICE CONFIGURED• An apparatus and method are described for an automotive internet of things (IoT) system, apparatus, and method. For example, one embodiment of an automotive Internet of Things (IoT) device configured within a car comprises: a wireless communication interface to take signal strength measurements to a mobile device, the signal strength measurements comprising signal strength values; and a signal strength analysis and notification module to analyze the signal strength values from the mobile device to determine when the user has left his or her mobile device at home or at another location and to responsively generate a notification to the user. The Internet of Things• refers to the interconnection of uniquely-identifiable embedded devices within the Internet infrastructure. Ultimately, IoT is expected to result in new, wide-ranging types of applications in which virtually any type of physical thing may provide information about itself or its surroundings and/or may be controlled remotely via client devices over the Internet.

No. of Pages: 22
No. of Claims: 8
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: Medicinal Rendering Bot

The present disclosure discloses a medicinal rendering bot that aids to assist the patient to have a timely intake of medication. The medicinal rendering bot comprises an upper part 101 arranged with two curved sections for accessing water and electronic communicating units, and wherein the two curved sections further comprises a removable water container 102 positioned on a left curved side of the upper part 101 is closed with a cap 103 to store water and to refill the water when needed. The voice assisting and remote communication unit 104 positioned on a right curved side of the upper part 101 that aids to alert a remote caregiver or a healthcare professional if there is any delay in medicine schedule and also provides a real-time voice message alert to the patient either regarding on-time medicine or any medicine delay information from the remote caregiver. The bottom part 105 connected below to the upper part 101 is arranged with a medicine storage unit 106 that comprises plurality of retractable containers 107 to store medicines and automatically open a required retractable container 107 at a specified time when medicine is to be taken by the patient.
Title of the invention: SOBEK TURBINE

Abstract:

Hydropower generation is an efficient and reliable source of renewable energy. Importantly, one way to reduce the greenhouse effect and anthropogenic climate change is power generation using hydro option. The use of renewable sources brings a new dimension to the global development particularly in rural and remote areas where continuous power supply is difficult to maintain. A frequent availability of renewable sources and comparatively better economics provide the hydro option suitable for developing countries such as India. This invention of designing and fabricating a micro-hydro turbine (named as "Sobek Turbine™") has a major impact in remote villages where continuous electricity supply is a challenge and an expensive one. The invention brings the growing demands of electricity needs to be met in both remote and rural areas. A micro-hydro turbine is a stationary rotor which can be pick and place into the water flow path. The moving water™s kinetic energy would be converted into mechanical energy, and further into the electrical energy. This invention addressed the fabrication of micro-hydro turbine rotor with lightweight material, portability and easy installation characteristics. The mechanism developed in this invention has a greater efficiency to achieve with the use of water flow directionality through the turbine rotor. The electricity that can be generated would be useful for small scale applications such as tube lights, fans, micro inverters, etc. The primary beacon of this invention is the use plastic waste to fabricate a polyurethane-coated turbine rotor in order to achieve sufficient strength. With the turbine head at the lowest position, regardless of the water flow levels, the turbine can work efficiently for all water flow conditions.
The Patent Office Journal No. 10/2020 Dated 06/03/2020

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<td>(22) Date of filing of Application : 02/03/2020</td>
<td>(43) Publication Date : 06/03/2020</td>
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(51) Title of the invention: METHOD FOR ANALYZING THE WEATHER MONITORING AND NOTIFICATION SYSTEM

(57) Abstract:
Exemplary embodiments of the present disclosure are directed towards weather monitoring and notification system, comprising: at least one environmental parameters detection device configured to determine various parameters of the climatic conditions and the at least one detection device comprises a plurality of sensors configured to detect a environmental parameters, at least one processing device operatively coupled to the plurality of sensors and configured to receive the environmental parameters detected by the plurality of sensors, at least one micro controller configured to process the environmental parameters and the at least one micro-controller connected to the at least one processing device, the processing device configured to convert an output from the at least one micro-controller to digital data, and at least one user™s computing device configured to receive the digital data from the at least one detection device.

No. of Pages: 15 No. of Claims: 8
Title of the invention: AR-Mining Technique: ADAPTIVE PSO BASED ASSOCIATION RULE MINING TECHNIQUE FOR SOFTWARE DEFECT CLASSIFICATION USING ANN

Abstract:

AR-Mining Technique: ADAPTIVE PSO BASED ASSOCIATION RULE MINING TECHNIQUE FOR SOFTWARE DEFECT CLASSIFICATION USING ANN ABSTRACT The Invention AR-Mining Technique categorizes various defects by using association rule mining dependent problem classification approach, which is applied to collect the actual defects using recognition. Association rule mining algorithm at times results in useless policies. To avoid this kind of concerns, the principles prior to classification determined by assistance as well as confidence value has to be optimized. In this exploration, Adaptive Particle Swarm (APSO) optimization algorithm is used. This Invention can discover the best assistance and confidence value to have the best policies. And finally Artificial Neural Network (ANN) can be used to classify the actual defects determined.

No. of Pages: 25 No. of Claims: 8
Surface of the concrete structures develop crack due to aging and continuous use. This indicates degradation of the surface at an early stage. Preventive maintenance of the concrete structure involves inspecting the surface regularly which allows timely reactive measures when the integrity of the structure is impaired by cracks. Improved performance is provided by the automotive parts in the process of inspection, with the resource efficiently used as trained inspectors conduct inspection manually. This invention proposes fully convolutional architecture of neural network based on U-Net for segmenting the cracks automatically. Operations of conventional pooling are static which reduces the input spatial size in the convolutional neural networks leading to information loss as some of the features are not taken into consideration and discarded. A novel function is incorporated in the architecture for pooling such as gated scale pooling which aims at retaining the features and to proactively adaptation of the pooled feature being mapped. Implementation of gated scale pooling proves to be superior than max pooling with better results compared to other techniques of segmentation of crack.

No. of Pages : 11 No. of Claims : 6
**Title of the invention :** PORTABLE WATER HEATING BOTTLE

**Abstract :**
Technology growth has become a greatest threat to mankind. As days goes on, new technologies are being evolved for a better habitat. But the technological growth increases with increase in dumping of waste materials and facing new diseases. Some of the waste materials are being mixed with the water bodies which are used for drinking purpose. Moreover, pollution of air is a major cause for the contamination of drinking water. So, it becomes a basic need to purify water and then to use it. Purification of water can be done in many ways. But easy portable 10 ways are not available. This product is a water heater that is portable and rechargeable.

No. of Pages : 11 No. of Claims : 2
A methodology and system to detect the passing of vehicles through one way lanes using remote sensors is an efficient methodology to manage the passing of vehicles in restricted areas without the knowledge of traffic police or traffic control board. The system includes plurality of remote sensors to sense the entry of vehicles and initiate the signals to the Road Traffic control board along with alert message to the vehicle that has entered into a wrong road, so that driver can take immediate action. A smart device with plurality of sensors to initiate communication with the vehicle and Traffic board will be placed at the Entry of each and every one way lanes. The camera placed with the smart device will automatically capture the images of vehicles that pass through the lanes in restricted direction on receiving an initiation signal from a Sensor. Also all the information regarding the unauthorized entry of vehicles are stored on the cloud server for future references and analysis.
Sharing of data between organization especially hospitals has the crucial problem of securing data privacy as most of the organizations such as in medical field the patient™s data is stored in the form of electronic records with the full history of patient™s health. Health care of the patient is improved by using the data stored by the research analyst or by other organizations. But sensitive information about the patient such as sex, blood group, age, date of birth of the patient are all contained in the data record. The privacy breach can be caused by revealing of the sensitive data of the patients. Research has triggered leading to various techniques for preserving the privacy has been introduced. Hence the proposed invention is designed for sending the data to various organizations by hiding the sensitive information of the patient in a secure manner. Different functions of membership of fuzzy logic are used for encrypting the sensitive data. Then the modified data is sent using the autoencoder based neural network. This output data from the autoencoder can be utilized by various organizations.
The Patent Office Journal No. 10/2020 Dated 06/03/2020

(54) Title of the invention: MEDICAL EMERGENCY ALERT SCHEME THROUGH WIRELESS SENSOR NETWORK AND THE CLOUD COMPUTING AT POPULATED PLACES

(57) Abstract:

Time to care the family members is a costlier thing in human life. To think of attention seeking persons like critical care in-patients who need 24/7 assistance for an undefined time. The need for regular health monitoring and notifying any anomaly is the requisite of any health service provider. Such patients can be monitored through wireless sensors installed in the spatial area to track vital body parameters like temperature, pressure, heart beat count and other parameters. The public places we assist include various unhygienic factors causing dangerous diseases if unnoticed. They are at-times communicable too. The inbuilt indicator in human body is the body temperature and heart beat variation including other vital signs. To identify any such person the public places can include infection detective mechanism connected with public hospital to provide better care. The visitors requested to come across the panel of sensors to detect the body temperature and any specific viral infection. The health sensors available in market are carefully chosen to implement this mechanism. The sensors installed at various common places could identify the notified infection and report to the public hospital which can initiate the treatment process within few minutes of identification. The same can be extended as medical emergency alert system in public places to notify any kind of medical assistance.

No. of Pages: 8
No. of Claims: 6
Title of the invention: A COLLAPSIBLE AND PORTABLE LACTATION MODULE FOR MOTHERS

Abstract:
A portable, collapsible, private and secure lactation enclosure for use by working mothers who would like to comfortably express milk at work using a breast pump or breastfeed their baby. The lactation enclosure is a relatively lightweight rectangular unit with readily collapsible walls, floor, and screened ceiling, allowing for ventilation and ambient light. The interior is light, secure, roomy and inviting for the mother and includes seating for the mother, and a table and electrical outlet for a pump. The invention comprises a room body, wherein the room body comprises a top plate, a left wallboard, a right wallboard, a rear wallboard and a bottom plate, as well as a door arranged in the front of the room body; seats for rest of lactating women are arranged in the room body; an air feeder is arranged on the top plate, and regulation/control push buttons of the air feeder are mounted on the left wallboard or the right wallboard; a vent hole is formed on at least one of the left wallboard, the right wallboard and the door; and a lighting lamp, a smart human body sensor and an automatic circuit control device and multiple security alert systems including facial recognition algorithm and biometric sensors are arranged in the room body. The maternal-infant feeding room in the public places is practicable, light, convenient for moving, and suitable for maternal-infant feeding in the public places (various waiting rooms, large and medium-sized shopping malls, as well as supermarkets, hospital waiting halls, airplane waiting halls, large and medium-sized restaurants and the like). Therefore, inconvenience and embarrassment caused by feeding in the public places are avoided, and the privacy of the women is also protected.
ABSTRACT In current era, a large number of industries use vibrating machines. There is need in the industries for modern technology based vibrating machines. Conventional vibrating machines are simple in structure but not efficient, hence novel vibrating machines are to be designed to provide higher efficiency. Other processes in the industries can be improved by proper vibrating machines. In ore industries, extraction of ore by vibration machines is comparatively efficient and safe. In construction industries, vibrating machines are used as compactors used in reinforcing the concrete material. This invention focuses on the engineering method for the determination of parameters of electric drive vibrating machine for compaction of concrete products at manufacturing level based on modern electric drives. The resonant mode is adjusted in the proposed method as the parameters calculated in the vibrator are efficient for a suspension based two stage vector controlled induction motor in the industry.
Title of the invention: SMART VOICE COMMANDING GPS WATCH

Abstract:
In recent days, women in India now participate in various activities such as education, sports, Politics, service sectors, science and technology. Moreover, they are own less security for staying alone in the world and have many issues regarding their security. In the critical conditions, while travelling far away from the home, they have to undergo various difficult situations to protect themselves every time. In order to view their security and safety purpose, the government has provided various measurements to adopt rules and regulations to the society. Even though it has a superpower and economic development, but still there are many crimes against women. The atrocities against the women can be brought to an end with the help of our innovatory gadget known as VGS WATCH (Voice commanding GPS location sharing watch) with the help of this device without activating any safety devices manually simply a girl can save her life by using her secret voice commanded code. When the women are in threat, instead of making a phone call, she can share her location with the help of secret code saved in VGS WATCH. By using the GSM module the victim's location is sent to the registered contact number and some inbuilt contact numbers like the nearby police station and ambulance. It is very easy and quickly accessible for providing the quality of the service.
This invention is related to electronic display stream encoder, particularly one pixel per one clock throughput producing micro architectural encoder wherein the architecture contains a control unit, pixel memory and pipelined predictor architecture. The control unit which controls the working of the architecture by providing required enable signal and memory address to it. The memory buffer architecture is used to store the predicted pixels, the pixel values are fed to predictor architecture through a line buffer. The control unit sends the enable signal to every stage of the architecture and makes the predictor architecture functional synchronized at the required time. The predictor architecture calculates the predicted pixels based on MMAP protocol. The original pixels are fed to the predictor architecture through line buffer. The prediction of present window of pixels depends on previous reconstructed pixel. So, the reconstructed pixels are fed back to predictor architecture from the predicted pixel memory, wherein the reconstructed pixels in the memory are fed to output buffer. The output buffer sends the reconstructed predicted pixels at the rate of 1 pixel per clock cycle. Fig 2
The system is intended to sense/measure various parameters in the electrical network such as Voltage, current, Frequency, Disturbances, Harmonics, etc. with the sensors. The data from the sensors is transmitted to either to central server or computer or cloud through various communication protocol. The Machine Learning (ML) or Artificial Intelligence (AI) software residing on the central server or computer or cloud will receive the data from measuring devices and analyzes the data based on the preset algorithm and provides an alert for the problem that are existing or that may arise in future. The system also provides the recommendation to resolve the problem automatically without any human intervention.

No. of Pages : 13 No. of Claims : 6
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 : CABLE MOUNTING ARRANGEMENT IN SOLAR POWER PLANT

(51) International :H02G0003040000,H02G0003060000,H02G0003380000,H04R0001020000,F24S0025000000
classification

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

(62) Divisional to Application Number Filing Date

(57) Abstract :
The present disclosure provides a mounting arrangement (100) for carrying DC cables in a solar power plant. The mounting arrangement (100) eliminates the entire process of excavation and cable burial thereby easing the process. The mounting arrangement comprises a plurality of perforated C channel cable trays (2), a plurality of connection channels (4) and an at least one clamp (6). The plurality of perforated C channel cable trays (2) having a hollow space (202) for accommodating the DC cables. The plurality of connection channels (4) configured to join the plurality of perforated C channel cable trays (2) and at least one clamp (6) provided for mounting the plurality of perforated C channel cable trays (2) on the columns (8) of the mounting arrangement (100). the mounting arrangement (100) is pre-fabricated at factory and directly installed at the solar power plant.

No. of Pages : 15 No. of Claims : 7
CELLULAR REINFORCEMENT SUPPORTED EMBANKMENT ON EXPANSIVE SOIL

Reinforced embankment requires good quality cohesion less soil as backfill material with reinforcement for its stability. The demand of good quality backfill material increases for the new construction projects such as retailing walls, embankments, roads and foundations. The concept of soil reinforcement can be used to accommodate of waste material to improve properties of weak soil. In the present invention, model tests were performed for cellular reinforcement (geocell) above embankment of expansive soil which is constructed over black cotton soil. The cellular reinforcement was made from locally available waste materials, i.e. plastic glucose bottle, beer cane, and stone dust were used. A three dimensional cellular reinforcement was made with these waste to use as reinforced material. In the present invention, surcharge pressure-deformation was compared for unreinforced and cellular reinforced (geocell) embankment of expansive soil.
We all have heard that God (or Nature) has created everything, living or non-living. Human beings are also a part of them. But we humans have modified everything according to our needs and desires. We created machineries, technologies, powers, energies, systems, living standards, etc. purposefully to become more advanced to achieve huge successes. We put best efforts and explored all our abilities in every field to gain best results. We also developed certain methods to boost the human abilities to hit more progress than our reach naturally. As efforts keep going to increase human abilities to achieve more successes and advancements, here's a successful effort made to improve the listening ability, with just a simple mechanical device designed on basic physics principles related to sound waves. As nature has designed the human body in such a way that ears has got a place in our body so that we can hear sounds from all directions. But there are cases when we are supposed to hear sound from just one direction (mainly front). In such cases, the unnecessary sound (noise) disturbs us to focus on the sound which is important. This device is capable of making its user to listen the sounds from the front direction and his/her own voice hyperactively, and can conquer one of the major issues, i.e. the problem in mass oral communication due to inattentive listening and noise disturbances. THE BEST FUNCTIONALITY OF THIS DEVICE IS TO BE USED BY THE STUDENTS IN STUDY INSTITUTIONS SUCH AS SCHOOLS. TO IMPROVE LEARNING BY LISTENING WHICH WILL IMPROVE THE EDUCATIONAL SYSTEM AND WHOLE SCHOOL ENVIRONMENT WHICH IS BENEFICIAL FOR THE FUTURE.
The present application is related to an integrated multi nozzle hydromount for vehicle engines to ensure better damping and stiffness control parameter to the engine for maintaining the vibration displacement wherein two additional tuning parameters comprising primary (25) and secondary (26) membranes and tracks (13 and 14) in the lower nozzle (4a) are provided that reduces dynamic stiffness and increases damping thereby attenuating the whining noise in the vehicle.
The present invention relates to an over slam bumper (200) for a vehicle, comprising, a damping unit (210) integrally provided with two or more protrusions (230) at one end and a hole/insert (300) in the centre about its length; a flexible locking unit (220) inserted into the hole/insert (300) of the damping unit (210), wherein the flexible locking unit (220) comprises a fixed integrated push button (260) on one end and a slidable locking pin (270) having two or more arms protruding from centre at the other end; at least two arms protrudes from the centre and are integrally connected towards the bottom end of the insert (300) and fixed while being pre-locked into an inner circumferential surface of the insert (300) before a predetermined portion thereof is inserted into the penetration aperture (22).
A device for cleaning a photovoltaic module is disclosed. The device includes a drive motor operatively coupled to a transmission assembly, wherein the transmission assembly provides power to rotate at least one drive wheel of the device as well as a first shaft holding at least one cleaning brush, the at least one cleaning brush configured to remove dust from the photovoltaic module. The at least one drive wheel moves the device along one axis while the at least one cleaning brush rotates along another axis. Movement of the device is over a frame of the photovoltaic module. Ratio of speed of the at least one drive wheel to that of the first shaft is adjustable. The at least one cleaning brush has bristles made of Poly Tetra Fluoro Ethylene (PTFE).
A stabilizer device for stabilizing a virtual reality (VR) display system to a user comprises a means for mounting the VR display system, a suspension system coupled to the VR display system and the mounting means, and a sensing device associated with the mounting means. The sensing device is configured to sense one or more parameters associated with a viewing position and a head position of the user. A processor receives the sensed one or more parameters from the sensing device, determines a change in the received one or more parameters, determines a corresponding change required in the positioning of the VR display system relative to the user based on the change in the one or more parameters, and actuates the suspension system to change the positioning of the VR display system relative to the user.
The present invention provides a simple and economic friction stir welding (FSW) tool/device which is capable to perform the welding without rotation of the shoulder. Stationary shoulder was fastened with a fixture body. Rotating tool is inserted in the fixture body with the help of a collet. The said tool has facility of automatic removal/pop out of the extruded material during the SSFSW.

No. of Pages: 22 No. of Claims: 5
The Patent Office Journal No. 10/2020 Dated 06/03/2020

(51) Title of the invention : SYNTHETIC HORSE FOOTING SYSTEM

(57) Abstract :
ABSTRACT SYNTHETIC HORSE FOOTING SYSTEM The present invention relates to an synthetic horse footing system suitable as a horse track, comprising a bottom layer, base layer, first intermediate layer and second intermediate layer provided with an infill material within and on top of said synthetic horse footing system and bottom layer of drainage material positioned below said first section, wherein the infill material comprises a top layer comprising mixture of silica, sand, shredded geo fibre and potassium polymer, optionally provided with a water retaining material such as coarse aggregate mix, a first intermediate layer comprises synthetic mat and the second intermediate layer comprises geo fabric. Also, there is described a method as performed by the aforesaid system.
Title of the invention: ADAPTER EXTENSION FOR INBOUND MESSAGES FROM ROBOTIC AUTOMATION PLATFORMS TO UNIFIED AUTOMATION PLATFORM

Abstract:
Implementations directed to direct messaging between one or more robotic process automation (RPA) platforms, and an autonomic platform (AP), and include actions of receiving, by a platform-specific adapter of the AP, data from a RPA platform of a plurality of RPA platforms the AP interacts with, the data indicating occurrence of a scenario, providing, by an application programming interface (API) of the platform-specific adapter, an occurrence message responsive to the occurrence of the scenario, transmitting, by the API, the message to the AP through a first channel, and transmitting, by the platform-specific adapter, a set of messages to the AP through a second channel that is separate from the first channel, the set of messages communicating tagged data records.
Implementations directed to instantiating adapters for communication between a UAP and one or more RPA platforms, and include receiving, by an intelligent adapter service of the UAP, input representing an RPA platform of a plurality of RPA platforms, querying, by the intelligent adapter service, one or more files of the RPA platform to determine one or more identifiers of the RPA platform, selecting, by the intelligent adapter service, an adapter of a plurality of adapters based on the one or more identifiers of the RPA platform, installing, by the intelligent adapter service, the adapter, and configuring, by the intelligent adapter service, the adapter to be specific to the RPA platform, configuring including setting one or more parameters of the RPA platform.
The Patent Office Journal No. 10/2020 Dated 06/03/2020

Title of the invention: A PROCESS AND TWO-STEP CATALYTIC REACTOR SYSTEM FOR THE PRODUCTION OF LIQUID HYDROCARBONS FROM PLASTIC WASTE

Abstract:
The present invention relates to a process and a system for the production of liquid hydrocarbons by thermo-catalytic cracking of plastic waste. The invention relates to a technique for efficiently producing high-quality liquid fuel using designed reactor setup for the cracking of waste plastic. The invention also relates to a thermo-catalytic cracking method, which occurs in the presence of zeolite-based catalysts, more preferably the zeolite catalysts impregnated with transition metals which remain catalytically active up to 8-10 sets of reactions with higher selectivity of petroleum range hydrocarbons. The present invention also relates to a two-step approach system for the production of liquid hydrocarbons.
A system for scanning an object 112 is provided. The system includes a continuous conveyor belt 102, a first electromagnetic radiation sensor 104, a second electromagnetic radiation sensor, a tunnel 106, an electromagnetic radiation generator 108, a third electromagnetic radiation sensor, a fourth electromagnetic radiation sensor 110 and a processor. The continuous conveyor belt 102 receives the object 112 and moves the object 112 in forward direction. The first electromagnetic radiation sensor scans the object 112 that is travelling through the continuous conveyor belt 102. The tunnel 106 receives the object 112 from the continuous conveyor belt 102 after scanned through the first electromagnetic radiation sensor 104. The second electromagnetic radiation sensor is positioned inside the tunnel 106 at entry point. The electromagnetic radiation generator 108 receives a second signal from the second electromagnetic radiation sensor to generate an angular beam of electromagnetic radiation on the object 112.
The present invention is directed towards an engraving machine for artisans, said machine comprising a platform; a base plate located on the platform, the base plate being configured to receive a work-piece to be engraved; a first support member moveably coupled to the platform; a first motion imparting means for imparting motion to the first support member along a first direction; a second support member moveably coupled to the first support member; a second motion imparting means for imparting motion to the second support member along a second direction, the second direction being perpendicular to the first direction; a third support member moveably coupled to the second support member; a third motion imparting means for imparting motion to the third support member along a third direction, the third direction being perpendicular to the first direction and the second direction; and an engraving tool operably coupled to the third support member.
Title of the invention: A MAGNETORHEOLOGICAL FLUID AND A PROCESS FOR PREPARATION THEREOF

Abstract:
The present disclosure provides a bio-degradable additive-free magnetorheological fluid. The magnetorheological fluid (MRF) composition comprises, 10 to 35 volume% of a magnetic-responsive particle component, and 65 to 90 volume% of a biodegradable carrier fluid component, wherein volume% of the components is with respect to the total volume of the composition. The magnetorheological fluid (MRF) composition is an additive-free, two component composition, which is economical and has low sedimentation rate. A process for preparing the same is also described.
A door opening mechanism (300) for a refrigerator (200) is provided. The door opening mechanism (300) comprises at least one fastener (302) to hold the door opening mechanism (300) with the door (202); a door stopper (304) having C type cross-section; and a bush (306) fixed to a top cover of the refrigerator (200). The fasteners (302) are capable of bearing load of the door (202) and the door stopper (304) effectively restricts movement of the door (202).
The Patent Office Journal No. 10/2020 Dated 06/03/2020

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/09/2018
(21) Application No.201811032894 A
(43) Publication Date : 06/03/2020

(54) Title of the invention : LIGHT EMITTING DIODE LUMINAIRE

(57) Abstract :
Described herein is a light emitting diode (LED) luminaire comprising a cylindrical plastic housing having a first open end and a second open end. At the first open end, an externally threaded formation terminating with a flange is formed to mate with an internally threaded mounting unit, and at the second open end, an internal ridge is formed with a circumferential groove at its base. Inside the cylindrical plastic housing, an aluminum heat sink is insert molded. The aluminum heat sink has a cylindrical profile matching with the internal profile of the plastic housing. The aluminum heat sink has an open end towards the first open end of the plastic housing and a closed end resting on the internal ridge at the second open end of the plastic housing. With the interior surface of the closed end of the aluminum heat sink, a printed circuit board (PCB) holder plate locks a PCB driver. At an exterior surface of the closed end of the aluminum heat sink, metal core PCB (MCPCB) for LED is mounted at an exterior surface of the closed end of the aluminum heat sink and is connected to the PCB driver for receiving driving current. On the top of the MCPCB, a plastic diffuser is mechanically locked in the circumferential groove formed at the base of the internal ridge so as to cover the MCPCB for LED.

(71) Name of Applicant :
1) OVERDRIVE ELECTRONICS PVT. LTD.
Address of Applicant : C-121, Hosiery Complex, Phase II Extension, Noida, G.B. Nagar, 201305 (U.P.) INDIA
(72) Name of Inventor :
1) MOHIT MITTAL
2) NAGESH CHANDRA NATH
3) MANISH KUMAR PANDEY

No. of Pages : 30 No. of Claims : 9
Title of the invention: A CATALYST SYSTEM FOR SYNTHESIZING ACYCLIC AND CYCLIC IMINE COMPOUNDS FROM ACYCLIC AND CYCLIC SECONDARY AMINES AND A PROCESS FOR THE SAME THEREOF

Abstract:
The invention is in the field of synthetic chemistry and hydrogen generation. More precisely, this invention presents a process to synthesize acyclic and cyclic imine compounds and hydrogen by the dehydrogenation of secondary amines using an in situ catalyst system developed by using hydrated ruthenium halide and N-benzylhexamethylenetetramine under toluene reflux condition. The synthetic protocol which yields cyclic and acyclic imines in moderate to excellent yields is atom economic as it avoids the use of oxidizing agent/hydrogen acceptor and is highly selective providing fully dehydrogenated products. The formation of hydrogen as only by-product also suggest that the possible usage of the catalyst system in hydrogen generation.
The present disclosure relates to camouflaging and particularly to method and system for selecting camouflage measures for real world application. Accordingly, the method comprises obtaining a digital representation indicative of a target-terrain scenario for display in response to a user-input. The target-terrain scenario comprising a target-object positioned at a desired location on a terrain; determining visualization parameters associated with at least one of the target-object and the terrain; selecting and applying a camouflage measure to the target-object to obtain a modified digital representation for display, the camouflage measure being selected based on the visualization parameters from a plurality of camouflage measures stored in a storage unit; receiving a further user-input on the modified digital representation, the further user-input indicative of a viewing angle and a viewing direction associated with the target-object; analysing the modified digital representation based on analysis parameters, the viewing angle, and the viewing direction to determine a detection probability of the camouflage measure; and selecting the camouflage measure as an optimal camouflage measure for real world application when the determined detection probability is less than a predefined threshold.
This invention relates to chloroform sub-fractions of methanolic extract of rhizome of Rheum emodi as potent antibacterial drugs against E. coli and K. pneumonia and antioxidant potential. 10 gram of methanolic extract of rhizome of R. emodi was subjected to sequential fractionations using hexane, chlorofrom, ethyl acetate and aqueous sub-fractions. The different solvent fractions were tested for antibacterial assay against B. subtilis, S. aureus, E. coli and K. Pneumonia using agar well diffusion method and broth dilution method to determine minimal inhibitory (MIC) concentration. The MIC values were very less (0.098 - 0.7813 μg/ml) against all the bacterial strains in chloroform sub-fraction as compared to crude methanolic extract (2.5-12.5 μg/ml). The measurement of IC50 value showed that chloroform sub-fraction has highest antioxidant potential as measured by DPPH and FRAP assay. The FIC data clearly showed synergistic activity between Chloroform sub-fraction and Erythromycin against S. aureus (0.5); chloroform sub-fraction and chloramphenicol against E. coli (0.187) and chloroform sub-fraction and tetracycline against K. pneumonia (0.249). Further, chloroform sub-fraction was separated using thin layer chromatography (TLC) to identify the phytocompounds and showed the appearance of three unique spot with Rf value of 0.45, 0.54, and 0.957 and named as chloroform sub-fractions I, II, III respectively. UV-Vis spectral analysis of chloroform sub-fractions (I, II, and III) of R. emodi showed the appearance of dual peaks at 500 nm and 300 nm for fraction I and at 300 nm for fraction II and III. The data of antibacterial assay showed MIC value of 2.5, 0.156, 1.25 μg/ml against E. coli for sub-fractions I, II, III respectively. The MIC value were 2.5, 0.312, 1.25 μg/ml against K. pneumonia for sub-fractions I, II, III respectively. The zone of inhibition values were 9±0.7 mm, 12±0.7 mm and 13±1.4 mm for chloroform sub-fractions I, II, III respectively against E. coli. On the other hand, zone of inhibition values were 9±1.4 mm, 12±0.7 mm, 9±1.4 mm for chloroform sub-fractions I, II, III respectively against K. pneumonia. The chloroform sub-fractions I, II, III showed IC50 value of 22.27, 12.702 and 15.1 μg/ml respectively. Based on LC-MS peaks, we identified major phyto-compound such as Emodin-D4, Rhein-13C6 (Fraction I); Chrysophanol dimethyl ether (Fraction II); Emodin-D4 and derivative of resveratrol (Fraction III).
The present invention relates to an antifungal formulation prepared from a combination therapy in which methanolic extract of Berginia ligulata leaves and rhizome as bioavailability enhancer is mixed with Fluconazole and amphotericin B to control Candidiasis. The invention discloses that methanolic extract of rhizome and leaves of Bergenia ligulata has antifungal activity against Candida strains. Methanolic extracts showed the presence of phenolics and tannins, flavonoids in leaf part and phenolics and tannins, flavonoids, carbohydrates, Glycosides and Saponin in rhizome part of Bergenia ligulata. Methanolic extracts showed comparative zone of inhibition with respect to antibiotics fluconazole and amphotericin B. Moreover, methanolic extract of rhizome and leaves of Bergenia ligulata showed enhancement of antifungal activity against S. cerevisiae and Candida strains when combined with fluconazole and amphotericin B. The methanolic extract of rhizome and leaves of Bergenia ligulata increase the bioactivity of existing antifungal agents such as fluconazole and amphotericin B and can be used to formulate new antifungal drugs to increase the efficacy and reduce dosage and time to treat Candida infections. Synergistic activity against fungal strains with fluconazole and amphotericin B as shown by FIC index. Quantitative measurements showed that methanolic extract of rhizome and leaves of Bergenia ligulata showed 382.8 ± 2.4 (rhizome), 134.8 ± 0.58 (leaves) TFC (mg/gram RE) and 232.5 ± 2.5 (rhizome), 142.75 ± 0.75 (leaves) (mg/gram GAE). IC50 values of methanolic extract of rhizome and leaves of Bergenia ligulata were very similar to Ascorbic acid. DPPH (μg/ml) values for methanolic extract of rhizome and leaves of Bergenia ligulata were 3.99 (rhizome) and 3.107 (leaves) respectively.
Method of performing acoustic zooming starts with microphones capturing acoustic signals associated with video content. Beamformers generate beamformer signals using the acoustic signals. Beamformer signals correspond respectively to tiles of video content. Each of the beamformers is respectively directed to a center of each of the tiles. Target enhanced signal is generated using beamformer signals. Target enhanced signal is associated with a zoom area of video content. Target enhanced signal is generated by identifying the tiles respectively having at least portions that are included in the zoom area, selecting beamformer signals corresponding to identified tiles, and combining selected beamformer signals to generate target enhanced signal. Combining selected beamformer signals may include determining proportions for each of the identified tiles in relation to the zoom area and combining selected beamformer signals based on the proportions to generate the target enhanced signal. Other embodiments are described herein.
The present invention discloses maxicuma, a water soluble composition of curcuminoids for improving the bioavailability, with the addition of pharmaceutical excipients particularly modified polysaccharides and sorbitan monoleate or its derivative, preferably polysorbate. The novel formulation, maxicuma, is manufactured from the curcuminoids 95% crystals which are extracted from turmeric rhizome by green extraction method involving ethanol, extraction and crystallization. The crystals obtained are dispersed in water containing plant phospholipid and polysorbate followed by blending with a suspension of polysaccharides in water. The homogenized suspension is run in Dyno mill to produce curcuminoids particle in nano level. The drying of nano-formulation prepared above leads to a bioavailable curcuminoids composition, which is studied for pharmacokinetics parameters with respect to unformulated 95% curcuminoids crystals. The animal study of maxicuma, the 40% curcuminoids of present disclosure shows 10-26% enhancement in the bioavailability as compared with the unformulated 95% crystals.
A method (350) for manufacturing a dump body (132) is disclosed. The dump body (132) includes an underbody (144) with an end (148), a wall (170) extending from the end (148), and rail plates (232, 234) extending up to the end (148). The method (350) includes welding a pivot bracket (254) to a first section (280) of the rail plates (232, 234), the first section (280) being distal to the end (148), the pivot bracket (254) including a first cover plate (260) adapted to be conjoined and lie in registration with the first section (280), and hinge plates (262) supported by the first cover plate (260). The method (350) further includes machining a hole (302) into the hinge plates (262) to facilitate a pivotable coupling of the pivot bracket (254) relative to a frame (108) of the machine (100). The method (350) also includes welding a second cover plate (256) to a second section (282) of the rail plates (232, 234). The second section (282) is proximal to the end (148) and extends in continuation from the first section (280) up to the end (148).
### Abstract
This invention relates to a method for construction of type II photocatalyst as efficient material for enhanced photocatalytic performance towards nitrophenol degradation. Nowadays, hybrid photocatalysts are achieving importance due to their exceptional and improved photocatalytic activity. In the present work, we have successfully synthesized Ag2CO3 and phosphorous, sulfur codoped g-C3N4 (PSGCN) based Ag2CO3/PSGCN photocatalyst via facile chemical ion-exchange deposition method. Phosphorous and Sulfur co-doped g-C3N4 (PSGCN) was prepared via thermal polycondensation method using diammonium hydrogen phosphate ((NH4)2HPO4) and thiourea as precursors. Ag2CO3/PSGCN nanocomposite was characterized employing various techniques such as scanning electron microscopy (SEM), transmission electron microscopy (TEM), X-ray diffraction pattern (XRD), Fourier transform infrared spectra (FTIR), X-ray photoelectron spectroscopy (XPS), Brunauer-Emmett-Teller (BET), ultraviolet-visible diffuse reflectance spectroscopy (UV-Vis DRS), photoluminescence (PL) and electrochemical impedance analysis. Successful formation of well dispersed Ag2CO3/PSGCN nanocomposite suspension in water was ascertained by Zeta potential and Tyndall effect experiments. Phosphorous and sulfur co-doping in g-C3N4 resulted lowering of optical band gap that enhanced its photodegradation ability under visible light. Reduction in photogenerated electron-hole pair recombination was confirmed by photoluminescence and electrochemical impedance analysis. Photodegradation of DNP followed pseudo first order kinetics and enhanced photocatalytic activity was due to semiconductor heterojunction for effective electron-hole pair separation. Holes and hydroxyl radicals were two main reactive species responsible for photodegradation of DNP into non-toxic products. COD, HPLC and LC-MS investigations were used to determine DNP mineralization. Ag2CO3/PSGCN nanocomposite revealed high stability and recycle efficiency substantial for ten catalytic cycles.
**Title of the invention:** SYNTHESIS OF GRAPHENE NANOPARTICLES USING GRAM FLOUR AS BIO-SURFACTANT AND STABILIZING AGENT

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**Abstract:**
The present invention provides synthesis of graphene nanoparticles using nontoxic bio-surfactant. Gram flour is used as a bio-surfactant for the preparation of graphene nanoparticles in liquid phase. Characterization of graphene nanoparticles is done by ultra violet-visible (UV-vis absorption) scanning electron microscopy (SEM) and energy dispersive X-rays (EDX). The UV-vis absorption confirms the formation of graphene nanoparticles and scanning electron microscopy (SEM) proves that morphology of graphene prepared is particles. EDX confirmed the purity of graphene nanoparticles. This process shows that low cost bio-surfactant can be used for nanoparticles synthesis as a nontoxic and biodegradable stabilizing agent.

**Name of Applicant:**
1) AMITY UNIVERSITY
Address of Applicant: AMITY UNIVERSITY CAMPUS, SECTOR-125 NOIDA UTTAR PRADESH-201313, INDIA UP

**Name of Inventor:**
1) JAGRITI NARANG
2) SHRUTI SHARMA
3) ANNU MISHRA
4) AKSHAY JAIN

No. of Pages: 10 No. of Claims: 3
The invention relates to a process for supervising an air conditioning system (8) of a railway vehicle. This process comprises the steps consisting of a) after starting the air conditioning system (8), measuring physical properties relative to the refrigerant, b) from the physical properties measured during step a), calculating thermodynamic properties, c) from the thermodynamic properties calculated during step b), calculating the density, optionally averaged, of the refrigerant inside each component of the air conditioning system, d) using manufacturer data, which includes the dimensions of each component of the air conditioning system, calculating the passage volume of the refrigerant inside each component of the air conditioning system, e) using the values calculated in steps c) and d) to calculate the total mass of refrigerant contained inside the air conditioning system, and f) comparing the total mass of refrigerant calculated in step e) with the total mass of refrigerant originally contained inside the air conditioning system.
(54) Title of the invention: RAW RUBBER SHEETS FOR SOIL STABILIZATION FOR SLOPES

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

(57) Abstract:
A cell material structure for restriction of cement and earth material, having a majority of rubber-strips reinforced together on their countenances in a one next to the other connection send at holding zones which are stumbled from strip to strip with the end goal that the majority of strips might be extended in a course opposite to the characteristics of the strips to shape a web of cells, the strips framing cell walls. At least one of the strips has an opening through which a reinforcing part expands. A clear to produce a without weld cell is produced using a rubber sheet material having entry points in that as sections of parallel lines.

No. of Pages: 7 No. of Claims: 2
The patent invention relates to the process for manufacture of low-fat Chakka and Shrikhand by using exopolysaccharides producing lactic cultures with improved textural and sensorial attributes. The indigenous fast acidifying lactic cultures comprising a combination of MTCC25192 and MTCC25193 producing unique heteropolysaccharides EPS Vis and EPS Ind at appropriate temperature, possessing limited water holding ability improves rheological and sensorial properties of the low-fat Chakka and Shrikhand with increased yield at least 5%. Compared to conventional method of Shrikhand manufacture, standardization of milk or addition of total milk solids (either milk fat or Solid-Not-Fat) or additives to the Chakka, is not required. Low-fat Chakka and Shrikhand manufactured by this method has desirable body and smooth consistency and has the advantage of being cost effective both for consumers and manufacturers.
The present disclosure envisages a process for hardening a metallic element. The process for hardening comprises the steps of heating the metallic element until it attains a first temperature within the range of 830°C to 850°C, quenching the heated metallic element until it attains a second temperature within the range of 105°C to 115°C, treating the quenched metallic element cryogenically until it attains a third temperature (< -120°C) and tempering the cryogenically-treated metallic element by heating it at a fourth temperature within the range of 165°C to 170°C for a predetermined time period. The process improves wear resistance and hardness of a bearing component without reducing fatigue life of the bearing component.
The present disclosure relates to a fiber integrated power cable (102) including one or more layers. The one or more layers surround a core of the fiber integrated power cable (102). The core of the fiber integrated power cable (102) includes a plurality of electrical conductor units (106a-c) positioned inside the core of the fiber integrated power cable (102). The core of the fiber integrated power cable (102) includes one or more fillers positioned inside the core of the fiber integrated power cable (102). The core of the fiber integrated power cable (102) includes at least one optical fiber unit (104) positioned in at least one interstitial space in at least one region including at least one of one or more second fillers (110), at least one of one or more third fillers (112) and a portion of a first layer (114) of the fiber integrated power cable (102).
Disclosed is a method for isolation, identification and synthesis of an attractant pheromone to control pink mealymalbug of grape, Maconellicoccus hirsutus. The method comprises steps of collecting from field and culturing the body extract of crawlers of pink mealymalbug, preparing the extract of mealymalbugs for GC/MS analysis and thereafter performing the bio-assay of the crude extract to identify the isolated pheromone. The compound structure of the isolated pheromone compound may be cyclopropylmethanol.
This invention relates to Ag3VO4 modified phosphorus and sulphur co-doped graphitic carbon nitride as high-dispersed photocatalyst for phenol mineralization and E. Coli disinfection. In this work, we have successfully anchored Ag3VO4 (AV) onto P and S co-doped g-C3N4 (PSGCN) to prepare highly-dispersible AV/PSGCN photocatalyst via deposition-precipitation method. The P and S co-doped g-C3N4 was synthesized via thermal polycondensation using hexachlorotriphosphazene (HCCP) and thiourea as precursors. The AV/PSGCN was characterized using various spectral techniques. The AFM analysis indicated the thickness of AV/PSGCN was less than 2.0 nm. The zeta potential and Tyndall effect experiments ascertained the formation of well dispersed suspension of AV/PSGCN in water. The co-doping of photocatalyst resulted in lowering of optical band gap in AV/PSGCN and Tyndall effect experiments ascertained the formation of well dispersed suspension of AV/PSGCN. The photoluminescence and electrochemical impedance analysis indicated suppression in photogenerated electron-hole pairs in AV/PSGCN. The photodegradation of phenol followed pseudo first order kinetics. Hydroxyl radicals and holes were the two main reactive species for photodegradation of phenol. The COD and HPLC analysis confirmed the mineralization of phenol in 6 h. Unlike conventional slurry type photo-reactors, AV/PSGCN was not magnetically agitated during photocatalytic reactions. AV/PSGCN exhibited significant antibacterial activity for E. Coli disinfection.
**Title of the invention:** AIR CONDITIONED BED ASSEMBLY

**Abstract:**
An air conditioned bed assembly to improve sleeping and relaxation experience of a user is disclosed. The bed assembly 100 comprises a bed 102 having a surface 104 for users to sleep thereon; a first wall 106 coupled at a first end of the bed 102; two foldable side walls coupled at two opposite sides of the bed 102; a foldable second wall 108 couple at a second end of the bed 102; and a foldable top wall 110 adapted to cover the bed 102 from the top such that an enclosed space is created to accommodate the users. The assembly also comprises an air conditioning unit configured with the first wall 106 for cooling the enclosed space, and a projector 112 configured with the first wall 106 such that videos and images are projected on the second wall 108.

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**Name of Applicant:**
1) KATARIA, Sandeep
Address: Link Road, Manohar Das Ji Ki Shamadhi Ke Piche, Gurjar House, Ratangarh, Churu 331022, Rajasthan, India.

**Name of Inventor:**
1) KATARIA, Sandeep
An object of the present invention is to make it easy to put in or take out an elongated article, such as a plastic bottle, from the storage pocket of a straddled vehicle, and also make it easy to pull a wire out from the power supply portion. A lid-less storage pocket includes an opening that is provided in the upper surface portion of a leg shield and that is open upward for putting in or taking out an article. A power supply portion is disposed more forward than the opening in the storage pocket. A charging device can be detachably mounted on the power supply portion and an axis of the power supply portion passes through the opening of the storage pocket.

In a vehicle side view, the opening of the storage pocket is disposed more upward than a front end portion of a seat surface of a seat, overlaps the power supply portion in a vehicle back view, and does not overlap the power supply in the vehicle plan view. The storage pocket has a length in the vehicle up-down direction that is greater than a length in the vehicle front-back direction. An area of the opening of the storage pocket in the vehicle back view is greater than an area of the opening of the storage pocket in the vehicle plan view.
A straddled vehicle is provided to improve the maintainability of an ABS unit and to suitably route the upper hydraulic pipe and the lower hydraulic pipe in the straddled vehicle. With a straddled vehicle, an ABS unit 13 is disposed downward from a main frame 22a, rearward from a down frame 22b, upward from a lower end 21a of a head pipe 21, and upward from a head cover 17 of an engine 10, in a vehicle side view. The ABS unit 13 is disposed on a side opposite a hydraulic brake 9 with respect to a vehicle center line L1 in a vehicle plan view. In this state, a first connected portion 52 and a second connected portion 53 are disposed frontward from a fuel tank 11 on an upper surface 51a of the ABS unit 13.
A method of producing an injection molding tool for molding an article includes producing a replica of the article using at least one of an additive manufacturing process, a solid freeform fabrication process, or a computer numerically controlled (CNC) process. A support block is configured to receive at least a portion of the replica of the article and support the replica with at least one of an outer peripheral surface of the replica or an inner peripheral surface of the replica positioned at a spaced distance from a peripheral surface of the support block. The replica is supported inside the support block at the spaced distance, a ceramic resin material is introduced into the spaced distance and cured to form a ceramic shell insert, the insert is removed from the cavity and sintered, and the insert is positioned within the support block to form a part of a mold tool adapted for installation in a standard plastic injection molding machine.
(54) Title of the invention: ALIPHATIC ANIONIC COMPOUNDS AND OXIDATIVE COMPOUNDS WITH IMPROVED STABILITY AND EFFICACY FOR USE IN PHARMACEUTICAL COMPOSITIONS

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(71) Name of Applicant:
1) MICROPURE, INC.
Address of Applicant: 16100 N. Greenway-Hayden Loop, F-400 Scottsdale, AZ 85260 U.S.A.

(72) Name of Inventor:
1) SHEWALE, Jaiprakash, G.
2) COOLEY, William, E.
3) RATCLIFF, James, L.
4) GARCIA-SMITH, Esmeralda, Ann

(57) Abstract:
Some embodiments described herein provide for a multi-component compositions and methods for its pharmaceutical and cosmetic use, comprising a combination of an aliphatic anionic compound, an oxidative compound, and a buffering system. Source of fluoride ion and other carriers are optional ingredients. The aliphatic anionic compound and the oxidative compound function together, in presence or absence of fluoride ion source, to protect the oxidative compounds from degradation prior to use and upon use, and to enhance the efficacy of the composition. In addition to achieving greater stability, combined effects of the aliphatic anionic compound, oxidative compound and source of fluoride ion achieve enhanced fluoride uptake, higher enamel protection by enhanced remineralization and reduced demineralization, increased plaque removal, reduced re-growth of plaque polymicrobial biofilm, greater amount of chlorite ion availability and effective oxidation of salivary biomolecules.

No. of Pages: 49 No. of Claims: 30
The medical arm assembly according to one disclosed embodiment comprises: a remote joint on which a remote point is located; a position-adjusting arm unit which supports the remote joint, is configured so as to be able to move the remote joint such that the relative position of the remote point with respect to a reference point changes only in the direction of a virtual straight reference line passing through the reference point and the remote point, and is configured so as to be able to fixate the relative position of the remote point; an operating arm unit which is connected to the remote joint, and which is configured such that a medical instrument can be fixed thereto, and also configured so as to be able to rotate the instrument with respect to a remote rotational axis that is vertical to the straight reference line and passes through the remote point, and so as to be able to move the instrument in the direction that is vertical to the remote rotational axis and passes through the remote point; and an arm-supporting unit by which the position-adjusting arm unit and the operating arm unit are connectedly supported, and on which the reference point is located.
(57) Abstract:
The medical arm assembly according to one disclosed embodiment comprises: a remote joint on which a remote point spaced forwardly apart from a reference point is located; a position-adjusting arm unit which supports the remote joint and is configured so as to be able to move the remote joint such that the relative position of the remote point with respect to the reference point changes in the forward-and-backward direction and the upward-and-downward direction, and also configured so as to be able to fixate the relative position of the remote point with respect to the reference point; an operating arm unit which is connected to the remote joint, and which is configured such that a surgical instrument can be fixed thereto, and also configured so as to be able to rotate the surgical instrument with respect to a remote rotational axis passing through the remote point in the left-and-right direction, and so as to be able to move the surgical instrument in the direction that is vertical to the remote rotational axis and passes through the remote point; and an arm-supporting unit by which the position-adjusting arm unit and the operating arm unit are connectedly supported, and on which the reference point is located.

No. of Pages : 26 No. of Claims : 14
Title of the invention: A SCREEN DEVICE

Abstract:
A screen device including dual-frequency vibrating screen, dust collector at the rear portion of the screen, air intake pipe and clean air pipe. The screen comprises screen box and screen core inside the screen box independently disposed. One end of the air inlet pipe connects to the front portion of the screen, and the other end connects to the air inlet of the dust collector. The air intake pipe is used to extract dust to the dust collector after screening one end of the clean air pipe connects to a purified air outlet of the dust collector, and the other end connects to the outside air thereby venting out purified air, the lower end of the dust collector has a dust outlet for discharging dust. The invention meets the environmental protection requirement, occupying less space, easy installation and debugging and air consumption saving.
An antenna array testing circuit can include a circuitry including a plurality of memory registers, a testing sequence generation logic, and a testing control logic. The memory registers can store, for each antenna element of a plurality of antenna elements of the phased antenna array, a corresponding antenna element ID. The memory registers can store a testing step ID indicative of a testing step of a sequence of testing steps. The testing sequence generation logic can determine, for each antenna element of the phased antenna array, using the corresponding antenna element ID and the testing step ID, a corresponding testing signal indicative of a testing state of the antenna element during the testing step. The testing control logic can cause each antenna element the phased antenna array to be configured according to the corresponding testing signal during the testing step.
A device includes a display and a housing. The housing surrounds the display and has four corners defining portions of an exterior surface of the device. The housing includes a first housing segment defining at least part of a first corner of the four corners and configured to operate as an antenna; a second housing segment defining at least part of a second corner of the four corners; and a third housing segment defining at least part of a third corner of the four corners. The third corner forms part of the housing diagonally opposite the second corner. The housing further includes a non-conductive housing component that structurally couples the first housing segment to another portion of the housing.
Title of the invention: CAMERA MODULE

A camera module includes a housing having a lens module, an aperture module provided above the lens module and including blades that form incident holes having different sizes in multiple stages or successively, a moving part configured to linearly reciprocate to drive the blades, including a driving magnet facing a driving coil, a position sensor configured to sense a position of the moving part according to interaction with the driving magnet, and a controller configured to receive a signal from the position sensor and confirm or correct the position of the moving part.
Title of the invention: WEARABLE ELECTRONIC DEVICE WITH HAPTIC ROTATABLE INPUT

Abstract:
One embodiment described herein takes the form of a watch, comprising: a housing; a crown comprising: a crown body outside the housing; and a shaft extending from the crown body into the housing; and an actuator coupled to the crown and configured to provide haptic output through the crown.
An information processing apparatus (20) includes a receiver (21) configured to receive a data set including a requested acceleration as information representing movement of a vehicle in a front-rear direction and any one of a steering angle, a yaw rate, and a rotation radius as information representing movement of the vehicle in a lateral direction from each of a plurality of applications, an arbitration unit (22) configured to perform arbitration of information representing the movement of the vehicle in the front-rear direction and arbitration of information representing the movement of the vehicle in the lateral direction based on a plurality of the data sets received by the receiver (21), and a first output unit configured to output instruction information for driving an actuator based on an arbitration result of the arbitration unit (22).
(57) Abstract:

Problem: A building information visualization device that allows a user to intuitively understand a time change of a usage situation for each floor of a building is provided. Solution: A visualization device 30 includes a storage device 31, a matrix generating unit 33, and a visualization processing unit 34. The storage device 31 stores building usage information, a floor identifier, and date and time information associated with one another. The building usage information is a numerical value indicating a usage situation of each floor. The floor identifier identifies the floor. The date and time information indicates a collection date and time of the building usage information. The matrix generating unit 33 generates matrix data, in a two-dimensional matrix that defines a first axis as a floor and a second axis as a time, by differentiating a display format of each cell positioned at an intersection point between the floor and the time depending on a magnitude of the building usage information associated with the floor identifier indicating the floor and the date and time information indicating the time. The visualization processing unit 34 visualizes the matrix data generated by the matrix generating unit 33.

No. of Pages: 36 No. of Claims: 9
A greasing device (100) is configured to feed grease to a contact portion between a release bearing and a pressing part of a clutch release fork. The greasing device (100) includes: a greasing pipe (130) configured to extend from the outside of a clutch housing (30) to feed grease to the contact portion through a through-hole (31) provided in the clutch housing (30), and to feed grease to the contact portion; and a positioning part (110) configured to position the greasing pipe by coming into contact with each of an inner surface (31a) of the through-hole (31) and a flat surface of the clutch release fork.
[Problem to be Solved] Deformation between a rear strut tower and a back-door opening 5 panel in the rear of a vehicle is prevented by a coupling member, to improve torsional rigidity performance of a vehicle body. [Solution] A rear structure of the vehicle body has: a rear strut tower 2 supporting an upper portion of a strut in a rear suspension; and a back-door opening panel 4 that is a panel of the vehicle body being adjacent to a back door 3 bent in a V-shape in a side view of a vehicle 110 and forming an opening 11 of the back door 3, in which a coupling member 6 extending in a longitudinal direction of the vehicle 1 is disposed between the rear strut tower 2 and the back-door opening panel 4, one end 6a of the coupling member 6 is attached to a surface 2a parallel to a side-surface direction of the rear strut tower 2, and the other end 6b of the coupling member 6 is attached to a 15 surface 4b facing a front side of the vehicle 1 in a section continuous to a bent portion 4a, bent in a V-shape, of the back-door opening panel 4, and the coupling member 6 is disposed such that a height at which the one end 6a of the coupling member 6 is attached and a height at which the other end 6b is attached are different.
(51) Title of the invention : CONTROL DEVICE

(57) Abstract :
A control device (20) for controlling a brake (3) of a vehicle includes an arbitrating unit (5) configured to receive motion requests for a plurality of actuators (12a,12b,12c,12d), which are used for controlling a motion of the vehicle, from a plurality of application requesting units (1a,1b,1c) related to driving support functions and to arbitrate the received motion requests, a command distributing unit (17) configured to distribute commands to controllers (8,9,10) for controlling the actuators (12a,12b,12c,12d) based on an arbitration result obtained by the arbitrating unit (5), and a feedback controller (16) configured to feed back a control record value indicating the motion of the vehicle, which is measured by using sensor units, to the application requesting units (1a,1b,1c) and to realize the motion of the vehicle requested by the application requesting units (1a,1b,1c).
## Title of the invention

**TEMPERATURE CONTROL OF ULTRASONIC END EFFECTOR AND CONTROL SYSTEM THEREFOR**

### Abstract

A generator, ultrasonic device, and method of determining a temperature of an ultrasonic blade are disclosed. A control circuit coupled to a memory determines an actual resonant frequency of an ultrasonic electromechanical system comprising an ultrasonic transducer coupled to an ultrasonic blade by an ultrasonic waveguide. The actual resonant frequency is correlated to an actual temperature of the ultrasonic blade. The control circuit retrieves from the memory a reference resonant frequency of the ultrasonic electromechanical system. The reference resonant frequency is correlated to a reference temperature of the ultrasonic blade. The control circuit then infers the temperature of the ultrasonic blade based on the difference between the actual resonant frequency and the reference resonant frequency.

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**No. of Pages**: 292  
**No. of Claims**: 24
Title of the invention: DISPLAY CONTROL APPARATUS

Abstract:

[Problem to be Solved] To reduce the probability of occurrence of a sense of incongruity between the impression an occupant receives from the display of the electric power steering assist amount and the perception of the occupant regarding the vehicle behavior while running.

[Solution] A display control apparatus 7 comprises a receiving unit 7A that receives a steering assist amount in an electric power steering system of a vehicle and a measured value of a yaw rate sensor provided in the vehicle; a sign determination unit that determines a sign of the steering assist amount or a sign of the measured value of the yaw rate sensor received by the receiving unit; and a calculation unit 7B that calculates a display steering assist index value to be displayed on a display device in the vehicle based on the sign determined by the sign determination unit, and the steering assist amount and the measured value of the yaw rate sensor received by the receiving unit.

Diagram:

No. of Pages: 30 No. of Claims: 3
A control device (10) for an internal combustion engine (2) includes at least one processor (12) and a memory (14) configured to store a program. The at least one processor (12) is configured to execute, by executing the program, a process of deciding a manipulated variable of the internal combustion engine from a control input value, in accordance with a predetermined conversion rule, a process of calculating a sample value of the controlled variable, a process of calculating a reference expectation value of the controlled variable from the control input value, a process of performing a hypothesis test for a null hypothesis that an average value of a predetermined number of recent sample values of sample values of the controlled variable is equal to the reference expectation value, and a process of modifying the conversion rule by an adaptive control when the null hypothesis is rejected.
An electric power source system (1) for a vehicle includes: a high-voltage battery (10); a first electric power source arrangement (100); a second electric power source arrangement (200); and a third electric power source arrangement (300), wherein the first electric power source arrangement includes a first DCDC converter (21) and a first battery (31) and is configured to supply the electric power to a first load (41) including at least an automatic driving system (411), the second electric power source arrangement includes a second DCDC converter (22) and a second battery (32) and is configured to supply the electric power to a second load (42) including at least a steering ECU (422, 431), a brake ECU (423, 432), and an information communication unit (424), and the third electric power source arrangement includes a connection controller (23) and a third battery (33) and is configured to supply the electric power to a third load (43) including at least the steering ECU, the brake ECU, and the information communication unit.
A power unit (10; 110; 140; 160) structure for a vehicle includes a motor (42) disposed in a power unit room (12) of the vehicle and configured to transmit a driving force to drive wheels (56) of the vehicle, an electric power converter (48) disposed in the power unit room (12) of the vehicle, and an electric power distributor (44) disposed in the power unit room (12) of the vehicle. The electric power converter (48) is configured to convert supplied electric power into electric power to be supplied to the motor (42) and is disposed on an upper side of the motor (42). The electric power distributor (44) is configured to distribute electric power supplied from a power supply (74) to the electric power converter (48) and is disposed at a position where at least a part of the electric power distributor (44) overlaps the electric power converter (48) in an up-down direction of the vehicle when viewed from a vehicle front-rear direction or a vehicle width direction.
Method for securely and permanently storing key data in an electronic component. The invention relates to a method for storing key data (K) in an electronic component (BE), which is designed as a programmable integrated circuit, e.g. as a Field Programmable Gate Array and has a basic structure consisting of basic elements (Bl, ..., Bn). In this context, for a current programming in each case, configuration data (CON) is loaded into the respective basic elements (Bl, ..., Bn) and stored there in a volatile manner. The key data (K) is divided (101) into key data subblocks (K1, ..., K6) and a basic element position in the basic structure is selected (102) for each of the key data subblocks (K1, ..., K6). When compiling the configuration data (CON) for the current programming or circuit function of the electronic component (BE) in each case, the selected basic element positions of the key data subblocks (K1, ..., K6) are taken into consideration (102). When loading the configuration data (CON) of the current programming of the electronic component in each case, the key data subblocks (K1, ..., K6) are stored (103) in those basic elements (Bl, ..., Bn) which are defined by the selected basic element positions. After the programming of the electronic component (BE) has taken place, the key data subblocks (K1, ..., K6) are determined from the respective basic elements (Bl, ..., Bn) specified by the selected basic element positions and assembled (104) to form the key data (K). Fig. 1
(54) Title of the invention: REMOTE CAPACITIVE INTERFACE

(57) Abstract:
Computing devices, input devices, keyboard assemblies, and related systems include a set of conductive traces or leads configured to transfer a capacitive load from an appendage of a user or another capacitive load source from a remote location, such as on a keycap of the keyboard, to a conductive portion or electrode on the keyboard that is positioned near a touch-sensitive interface of a computing device. The capacitive load is thereby transferable through the conductive traces or leads to the touch-sensitive interface without having to directly apply the load, such as by touching a finger to the interface. This can reduce or eliminate the need for onscreen controls or keyboard interface elements in a touch screen device without having to use a more expensive and energy-draining wired or wireless connection between the computing device and a keyboard case or accessory for the computing device.
The present invention provides a topical composition comprising an extract of Pichia anomala and n-acetyl glucosamine.
Title of the invention: TOPICAL COMPOSITIONS COMPRISING PICHIA ANOMALA AND A SOY PRODUCT

Abstract:
The present invention provides a topical composition comprising an extract of Pichia anomala and a soy product.

Name of Applicant:
1) Johnson & Johnson Consumer Inc.
   Address of Applicant: 199 Grandview Road, Skillman, NJ 08558, USA, U.S.A.

Name of Inventor:
1) Liu-Walsh, Fang
2) Garay, Michelle
3) Maitra, Prithwiraj
4) Randhawa, Manpreet

No. of Pages: 33 No. of Claims: 10
The present invention provides a topical composition comprising an extract of Pichia anomala and retinol.

No. of Pages: 33  No. of Claims: 9
A controller includes a valve control unit and a target calculation unit. The valve control unit is configured to control a fuel injection valve such that divergence decreases between an ignition delay of fuel injected into a cylinder through main injection and an ignition delay target value. The target calculation unit is configured to calculate the ignition delay target value such that the ignition delay target value decreases as estimated ignitability of the fuel in the cylinder increases during an engine operation in a region where diffusion combustion and premix combustion are both performed, the ignitability of the fuel in the cylinder being estimated based on a parameter that varies the ignitability.
## Abstract:
The support arm 6 and the swing arm 29 are connected at the mounting locations P1, P2 provided above and below the axle 292 provided in the swing arm 29, the support arm 6 supporting the sari guard 53 and the first rear fender 51. This can ensure a distance between the mounting locations P1 and P2 while suppressing a distance between each of the mounting locations P1 and P2 and the first rear fender 51 with the result that the support arm 6 and the swing arm 29 can be mounted while a sufficient stiffness is ensured for loads by the sari guard 53 and the first rear fender 51 supported by the support arm 6.
Title of the invention : VEHICLE BODY FRAME STRUCTURE OF SADDLE RIDING VEHICLE

Abstract :
[Object] To achieve favorable rigidity balance of a vehicle body frame in a vehicle body frame structure for a saddle riding vehicle. [Solving Means] In a vehicle body frame structure for a saddle riding vehicle, including an engine 10, a vehicle body frame F that supports the engine 10, and a swing arm 12 that supports a rear wheel 3. The vehicle body frame F includes a head pipe 15, a main frame 16 that extends from the head pipe 15 toward a rear of the vehicle along a path superior to the engine 10, a down frame 17 that extends from the head pipe 15 downwardly along a path anterior to the engine 10, a lower frame 18 that extends from a lower portion of the down frame 17 toward the rear of the vehicle along a path inferior to the engine 10, and a pivot support member 19 that extends from a rear portion of the lower frame 18 upwardly up to a position of a pivot shaft 27 that rotatably supports the swing arm 12. The pivot support member 19 includes a pivot support portion 62 that supports the pivot shaft 27.
Title of the invention: VEHICLE BODY FRAME STRUCTURE OF SADDLE RIDING VEHICLE

Abstract:
[Object] Providing a vehicle body frame structure of a saddle riding vehicle that can intend reduction in the weight of the vehicle body frame and improve the steering stability of the vehicle. [Solving Means] A vehicle body frame 11 includes a main frame 22 that extends from a head pipe 21 toward the vehicle rear side above an engine and a down-frame 26 that extends downward from one end fixed to the head pipe 21. The main frame 22 is assembled into a truss shape from a pair of left and right upper frames 31 and a pair of left and right lower frames 32 and reinforcing frames 33, 34, 35, and 36 disposed between these upper frames 31 and lower frames 32. Front end parts 31z of the upper frames 31 are fixed to the upper end side of the head pipe 21 and front end parts 32z of the lower frames 32 are fixed to a part close to the head pipe 21 in the single down-frame 26.
The present invention provides a gas turbine combustor which reduces NOx emissions for a hydrogen-containing fuel, is improved in reliability and realizes stable operation. The gas turbine combustor of the present invention includes a combustion chamber which burns a fuel and air, an air hole plate which is located on an upstream side of the combustion chamber and has air holes which are concentrically arranged plural in line and plural in number, and fuel nozzles which are arranged plural in line and plural in number, and a fuel nozzle inner wall has a fuel nozzle tapered shape which extends in an outer circumferential direction on a leading end part of the fuel nozzle.

No. of Pages : 38 No. of Claims : 9
A light emitting display apparatus (100; 300; 400; 500; 600; 700) includes a substrate (110) which includes a first area (A1) and a second area (A2), an insulating layer (112) on the substrate (110) and has an uneven surface, a first bank (114) on the insulating layer (112) in the second area (A2) and formed of a black material, a first electrode (131; 331; 531; 731) on the insulating layer (112) in the first area (A1), covering at least a part of a side surface of the first bank (114), a light emitting layer (132; 532) on the first electrode (131; 331; 531; 731), and a second electrode (133; 533) on the light emitting layer (132; 532).
(51) Title of the invention : COMPONENT ORDERING DEVICE AND COMPONENT ORDERING METHOD

(57) Abstract :
Provided is a component ordering device that estimates an order condition that is possible to be accepted by a supplier with higher accuracy. The component ordering device includes : an order condition proposal generation unit that generates a plurality of order condition proposals when negotiating with a supplier for a component to be procured, based on negotiation history information that is established by negotiating with the supplier in the past for another component belonging to the same component classification with the component to be procured, the negotiation history information including an order condition provided with a lot size and a unit price; and an output control unit that outputs the plurality of order condition proposals.
A motorcycle includes: an engine 9; a silencer 84 into which an exhaust gas from the engine 9 is to flow; an exhaust pipe 87 connecting an exhaust port 60 of the engine 9 and the silencer 84; a catalyst 81 provided in the exhaust pipe 87 and disposed in front of the engine 9; and footrests 15 and a brake pedal 17, in which the footrests 15 and the brake pedal 17 are disposed such that their positions in a front-rear direction at least partially overlaps the catalyst 81, and in which the exhaust pipe 87 includes: an upstream-side connecting pipe 83 that connects the exhaust port 60 of the engine 9 and an upper end portion of the catalyst 81, a downstream-side connecting pipe 85 that connects a lower end portion of the catalyst 81 and the silencer 84, and a catalyst cover 86 which is disposed on an inner side in a left-right direction of the motorcycle with respect to a space S directly above the footrests 15 and covers the catalyst 81, the upstream-side connecting pipe 83, and the downstream-side connecting pipe 85.
A water pumping system includes a control device (50, 150). The control device (50, 150) includes a first calculation section (51) configured to calculate an appropriate water level lowering amount corresponding to a pump discharge of a water drawn in a specified first period, a second calculation section (52) configured to calculate an inflow of the water into a well in the specified first period, based on a difference between an actual water level lowering amount in the specified first period and the appropriate water level lowering amount, a first pump discharge setting section (53) configured to set a first pump discharge that is allowed to be pumped from the well in a specified second period, based on the inflow of the water, and a pump operation control section (56, 156) configured to control an operation of the water pumping pump (20) such that the pump discharge does not exceed the first pump discharge in the specified second period.

No. of Pages : 25 No. of Claims : 5
A vehicle (110) includes an internal combustion engine (100), an electrically-heated catalyst device (33) provided in an exhaust passage (34) thereof, and an electronic control unit (200) configured to control base material electric power supplied to a conductive base material (35). The catalyst device includes the conductive base material that generates heat upon energization, and a catalyst heated through the conductive base material. The electronic control unit determines whether the conductive base material is in a stagnant period, where temperature of the conductive base material partially stagnates in a prescribed temperature zone, the stagnant period occurring when water is present inside the catalyst device in a process of increase in temperature of the conductive base material. When determining that the conductive base material is in the stagnant period, the electronic control unit controls the base material electric power supply to be lower than when determining otherwise.
A control device includes a processor (23) configured to: calculate an estimated value of a contribution of a disturbance in a transition of an internal state of a dynamic power unit (10, 30), based on a last internal state and a last control input by which the internal state is controlled; determine the control input so as to minimize a difference from a reference value of the control input by which the internal state becomes a predetermined internal state, under a condition that a sum of the estimated value of the contribution and a value of the constraint condition expression when there is not the disturbance at the current time is equal to or more than a value resulting from reducing a last value of the constraint condition expression by a predetermined ratio; and control the dynamic power unit in accordance with the determined control input.
A battery system (200) comprises a battery housing comprising a base body (201), a first cover element and a second cover element (203), wherein the first cover element closes a first open end face of the base body (201) and the second cover element (203) closes a second open end face of the base body (201), a battery cell holder (204) comprising a plurality of battery cells (205), and the battery cell holder (204) is disposed within the battery housing, and a battery management system (109) is adapted to monitor the plurality of the battery cells (205) and detects the temperatures of the individual battery cells (205).
Title of the invention: DISPLAY DEVICE

A display device including: a display panel configured to display an image on a first surface thereof; a first sound generating device configured to provide a first sound; and a second sound generating device configured to provide a second sound, wherein the first sound generating device is attached to a second surface of the display panel, the second surface being opposite to the first surface, and wherein the first sound generating device is a vibration generating device configured to vibrate the display panel in accordance with a first sound signal to generate the first sound.
In a knee airbag attachment structure, a knee airbag body includes a knee airbag main body and a cover portion that covers a surface of the knee airbag main body on a vehicle rear side, in which the cover portion includes a cover main body and a bag-side engaging piece that attaches the cover main body to the instrument panel opening, in which the bag-side engaging piece includes an extension plate portion being provided at an end portion of the knee airbag body on the vehicle rear side and extending in a plane direction of the instrument panel opening toward an edge of the instrument panel opening in a vehicle width direction, in which the edge of the instrument panel opening is provided with an instrument-panel-side engaging piece that engages with the bag-side engaging piece, and in which the instrument-panel-side engaging piece is provided with an opposite portion opposite to the extension plate portion on a vehicle front side of the extension plate portion in a state in which the knee airbag body is attached to the instrument panel opening.
Title of the invention: METHOD, HEATING DEVICE AND SYSTEM FOR HEATING AN ELONGATE SILICA CYLINDER FOR USE IN THE MANUFACTURING OF OPTICAL FIBERS

Abstract:
The invention relates to a device, system and method for heating an elongate silica cylinder, to form a core-rod for optical fibers. The method comprises providing a heating device having an elongate cavity, an elongate liner bounding the cavity, connecting to a frame of the device at opposing end portions, a heating element in a heating element space, surrounding the liner, the liner separating the heating element space from the cavity, and a gas flushing device for effecting a flow of gas at least through the heating element space. The method comprises providing the cylinder such that it extends through the cavity, heating the cylinder locally beyond the softening temperature, and effecting the flow of gas during the heating, the gas comprising at least argon gas and nitrogen gas.
An electronic balance (10) includes a storage (111) that stores a recipe in preparing a plurality of types of samples, a display unit (118) that displays a target value in weight based on the recipe stored by the storage (111), a measurement unit (115) that measures the weight of the sample, and a communication unit (113) that communicates with an external device (50). The communication unit (113) communicates with the external device (50) to obtain a recipe input by a user. The storage (111) stores the recipe provided from the external device (50) and obtained by the communication unit (113).
According to the invention a medical instrument (10) is disclosed, said instrument comprising a device for activating or deactivating a function of the medical instrument. The device comprises a first part (41) and a second part (48), in which case the second part (48) is arranged and set up to be moved into an operative position relative to the first part (41) in order to thus activate or deactivate at least one function of the medical instrument (10), and in which case the first part (41) is arranged and set up to be moved into an operative position relative to the second part (48) in order to thus activate or deactivate the at least one function of the medical instrument (10). The medical instrument (10) comprises, for moving the second part (48) into the operative position, preferably a second control element (16), which provides a control portion and comprises, for moving the first part (41) into the operative position, preferably a first control element (15) which provides an additional control portion. For activating the function, the first control element (15) can preferably be moved in a direction that is opposite the direction, in which the second control element (16) for activating the function can be moved. As a result of this, the function can be activated, for example by moving a control element (15) from the back to the front, i.e., in distal direction, and by moving another control element (16) in opposite direction from the front to the back, i.e., in proximal direction. A deflection of force by one actuating element (15, 16) for actuating the first part or the second part in opposite direction is therefore not absolutely necessary.
An adapter couples to a single component fluid dispenser. The adapter includes a cap section, a first outlet, a second outlet, and a coupling member. The cap section has a cap interior surface that defines a cap channel extending therethrough. The first outlet defines a first outlet channel extending therethrough that is in fluid communication with the cap channel. The second outlet defines a second outlet channel extending therethrough that is in fluid communication with the cap channel. The coupling member is configured to couple the adapter to a nozzle.
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No Filing Date

(57) Abstract:
A motor unit supporting structure (1) is for supporting a motor unit (20) composed of a motor (22) and a decelerator (24). The motor unit supporting structure (1) has a pair of side members (5) extending in the vehicle front-rear direction (Y) in a compartment (2) in which the motor unit (20) is accommodated, a sub-frame (30) extending in the vehicle width direction (X), a first mount set (40) supporting the sub-frame (30) on the pair of side members (5) via first elastic bodies (426), and a second mount set (50) supporting the motor unit (20) below the sub-frame (30) via second elastic bodies (56). The static spring constant of each mount of the second mount set (50) is lower than the static spring constant of each mount of the first mount set (40).

No. of Pages: 70 No. of Claims: 6
A motor unit supporting structure (1) includes a sub-frame (30) extending in the vehicle width direction (X), a second mount (50) supporting the motor unit (20) below the sub-frame (30) via second elastic bodies (56), within a compartment (2) located forward of a vehicle interior in which occupants get in, and a drive shaft (DS) having an axis extending in the vehicle width direction (X) and attached to the decelerator (24). The second mount 50 includes a rear mount (50B) having a rear second elastic body (56R) as one of the second elastic bodies (56), arranged forward of the rear-most end (20R) of the motor unit (20), and a pair of front mounts (50A) each having a front second elastic body (56F) as one of the second elastic bodies (56), arranged forward of the rear mount (50B). The motor unit supporting structure (1) further includes a torque rod (90) supporting the motor unit (20). The torque rod (90) connects the motor unit (20) to a vehicle body member in the compartment (2) via a set of torque rod elastic bodies (96). The torque rod (90) is connected to a rear portion of the motor unit (20) downward of the axis of the drive shaft (DS).
A motor unit supporting structure (1) includes a first mount set (40) supporting a sub-frame (30) on a pair of side members (5) via first elastic bodies (426), and a second mount set (50) supporting a motor unit (20) below the sub-frame (30) via second elastic bodies (56). A power supply section (60) for supplying power to a motor (22) is mounted on the upper surface of the sub-frame (30). Each mount of the first mount set (40) includes a side bracket (41) extending from above the sub-frame (30) toward above the side member (5), and a set of bushes (42) each having one of the first elastic bodies (426), and attached to the side bracket (41). Each side bracket (41) has a body portion (412) arranged inward of the side member (5) in the vehicle width direction and is fastened to the upper surface of the sub-frame (30), and extensions (414) extending from the body portion (412) and arranged above the side member (5). Each bush (42) is attached to each extension (414). A fastening part (46) penetrating the first elastic body (426) in the vehicle top-bottom direction (Z) is arranged inside the bush (42). A set of lower brackets (44) each arranged on an upper surface of each side member (5) is connected to a lower portion of the fastening part (46), while an upper bracket (45) extending from an inner wall (2s) of the compartment (2) toward the fastening part (46) is connected to an upper portion of the fastening part (46).
A hat-shaped member (1) includes: a pair of vertical wall parts (10); a top surface part (20); a pair of flange parts (30); a pair of upper corner parts (40) configured to connect the pair of respective vertical wall parts (10) and the top surface part (20). The hat-shaped member (1) includes a first hat part (100) and a second hat part (200) configured to be arranged along a longitudinal direction (L). A height (hll) of a first top surface part (120) of the first hat part (100) is the same as a height of the pair of first upper corner parts (140). A second top surface part (220) of the second hat part (200) includes a contraction top surface part (222) which extends at a position below the pair of upper corner parts (240) in a width direction and extension parts (224) which extend from the pair of respective upper corner parts (240) to the contraction top surface part (222).
A vehicle seat slide device includes an upper rail, a lower rail, a lock mechanism, and a lock release mechanism. The lock mechanism restricts relative movement of the upper rail. The upper rail includes two side walls and an upper wall. The lock release mechanism includes a lever member, a push portion, and a spring member. The push portion pushes an unlock element of the lock mechanism and performs an unlocking action with the lock mechanism when the lever member is pivoted based on an operation force. The spring member applies an urging force to the lever member in a direction opposite to the direction in which the lever member is pivoted. The spring member includes an engagement end, which engages the lever member, and a spring body. At least the spring body is arranged in an inner space of the upper rail defined below the upper wall.
A single-cylinder fixed-shaft cone crusher includes a body (1), fixed shaft (2), adjustment mechanism (3), crushing mechanism (4) and driving mechanism (5). The top end of the body (1) has a feeding opening (11). The bottom of the body (1) has a discharging opening (12). The fixed shaft (2) is disposed in the body (1). The adjustment mechanism (3) is disposed in the fixed shaft (2) and includes a hydraulic cylinder (31), central shaft (32) and eccentric shaft socket (33). The crushing mechanism (4) is fitted to the outer side of the fixed shaft (2), connected to the adjustment mechanism (3), positioned proximate to the feeding opening (11) of the body (1), and including an eccentric holder (41), cone core (42), a movable rack (43) and fixed rack (44). The driving mechanism (5) connects to the crushing mechanism (4). Therefore, the single-cylinder fixed-shaft cone crusher uses the fixed shaft (2) to provide optimal stability, allow the crushing mechanism (4) to rotate outside the fixed shaft (2) at high speed, thereby increasing gravel yield.
Title of the invention: DISPLAY DEVICE

Abstract:
A display device is disclosed. The display device includes: a display panel including an organic electroluminescent element; and a color filter on the display panel and including a plurality of color filter portions spaced from each other on a plane, wherein at least one color filter portion of the color filter portions comprises a scattering agent having an average diameter of 50 nanometers (nm) or more and 500 nm or less.
Title of the invention: WIRE FORMING MACHINE AND METHOD OF PRODUCING WIRE FORM PRODUCT

Abstract:
An object is to provide a wire forming machine and a method of producing wire form to enable to improve the productivity. A wire forming machine (10) repeats a cycle of forming a ring (91) from a wire material (90) fed from a wire feeding device (70) with forming tools (21, 22, 23), and cutting off the ring (91) from the successive wire material (90) with a cutting device (30), and includes a base drive device (40) operating in synchronism with the wire feeding device (70) and having a movable base (50) movable with a rear end (91E) of the ring (91). The cutting device (30) is mounted on the movable base (50) and cuts the wire material (90) while moving with the rear end (91E) of the ring (91).

No. of Pages: 27
No. of Claims: 13
Title of the invention : LIGHT SOURCE MEMBER AND DISPLAY DEVICE INCLUDING THE SAME

Abstract :
A light source member and a display device including the same are disclosed. The light source member including a guide panel, a light source disposed adjacent to at least one side of the guide panel, a low refractive layer disposed on the guide panel, and a color converting layer disposed on the low refractive layer and including a base resin and a quantum dot dispersed in the base resin, in which the low refractive layer includes a matrix part, a plurality of low refractive substances dispersed in the matrix part, and a void disposed in the matrix part, and an area occupied by the void is equal to or less than about 20% of an entire area of the low refractive layer.
Abstract:
The machine (100) comprises a working apparatus (10, 14, 16) arranged to carry out the working operation on a tube (T), or a similar blank, and a tube feeding device (22) arranged to feed the tube (T) towards the working apparatus (10, 14, 16). The working apparatus (10, 14, 16) and the tube feeding device (22) comprise respective clamping members (14) for clamping the tube (T) being worked. According to the invention, at least one of the clamping members (14) of the working apparatus (10, 14, 16) or of the tube feeding device (22) is provided with a displacement sensor (24) arranged to detect and measure any movements of the tube (T) relative to said clamping member (14) while the tube (T) is clamped by said clamping member (14) during the working operation.
It is an object of the present invention to provide a vehicle interior front structure with which the ability to carry out maintenance on a HUD device installed in an instrument panel can be increased, and the burden on a worker can be reduced. A vehicle interior front structure 100 according to an aspect of the present invention, including an instrument panel 110 disposed at the front of a vehicle interior, and a HUD device 140 that projects information and is housed in the instrument panel 110, the vehicle interior front structure further including a HUD bracket 150 that is fixed to the instrument panel 110 and supports the HUD device 140. The instrument panel 110 includes a top face 112 that extends in a vehicle-width direction, the top face is split in a front-rear direction into a front portion 120 and a rear portion 130, and a fixing portion 132 to which the HUD bracket 150 is fixed is provided on a back side of the rear portion 130.
Title of the invention: SADDLE-RIDING TYPE VEHICLE AND SIDE STAND BRACKET

Abstract:
A saddle-riding type vehicle includes a vehicle body frame 5, a side stand bracket 50 provided at a lower portion of one side of the vehicle body frame 5 in a vehicle width direction, and a side stand 41 supported by the side stand bracket 50, in which the side stand bracket 50 includes a stand connecting portion 54 to which a base end portion 41a of the side stand 41 is rotatably connected, and a protecting portion 56 which is provided in front of the stand connecting portion 54 in the vehicle and protects the base end portion 41a of the side stand 41.
(54) Title of the invention : HANDLE GRIP DEVICE

(57) Abstract :
A handle grip device includes: a handle grip body that is to be attached to a tip end of a handlebar provided in a vehicle, and that includes a collar portion that is formed on a base end side, and a grip portion that is capable of being gripped by a driver; light emitting means that is capable of emitting light; and a light guide member that is attached inside the handle grip body, that is provided to extend in a longitudinal direction of the handle grip body, and that is capable of guiding light from the light emitting means. The light of the light emitting means guided by the light guide member is emitted from the handle grip body to an outside. The light emitting means is disposed inside the collar portion of the handle grip body.

No. of Pages : 23 No. of Claims : 9
A foldable display device including: a display panel; an input sensor directly disposed on the display panel and having an upper surface; an anti-reflector disposed on the upper surface of the input sensor, the anti-reflector including: a polarizer; and at least one lower retarder disposed between the input sensor and the polarizer; an upper retarder disposed on the anti-reflector, the upper retarder having a Youngs modulus of about 4 GPa to about 100 GPa; a window disposed on the upper retarder and having an upper surface facing away from the upper retarder; and at least one adhesion member disposed between the input sensor and the window, wherein a thickness from the upper surface of the input sensor to the upper surface of the window is about 130 um to about 540 um.
A fiber reinforced resin molded article (10) includes a fiber reinforced resin layer (52), and a functional site (54) made up from a resin layer for molding (50) that does not contain reinforcing fibers (56). An insert member (44, 120, 210) is retained in an integrated manner in the functional site (54).
The present disclosure provides an electronic device (10) that includes a first housing (10), a second housing (20), a rotary shaft (30), a display screen (40), and at least one antenna radiator (80). The second housing (20) is rotatably coupled to the first housing (10) by the rotary shaft (30). The display screen (40) comprises a first portion and a second portion. The first portion is positioned on the first housing (10), and the second portion is positioned on the second housing (20). The at least one antenna radiator (80) is positioned on the rotary shaft (30) and configured to transmit radio frequency signals.
A fiber reinforced resin molded article (10) includes an impregnated site (58) made up only from a fiber reinforced resin layer (52), and a functional site (54) made up from a resin layer for molding (50) that does not contain reinforcing fibers (56). The functional site (54) is set to be thicker than the impregnated site (58).
The machine (100) comprises: a working head (22) carrying appropriate working tools to perform one or more working operations on a tube (T); a feeding unit (14) for feeding the tube (T) along its longitudinal axis (x) towards the working head (22); a programmable control unit for controlling the feeding unit (14) and the working head (22); and an optical sensor (34) arranged to optically measure the forward displacement of the tube (T) being worked along its longitudinal axis (x) and/or the rotational displacement of the tube (T) being worked about its longitudinal axis (x).
Title of the invention: HYBRID VEHICLE

Abstract:

Problem to be Solved] In a hybrid vehicle, an actual drive torque depending on a request from a driver can be efficiently obtained, while slippage of a belt can be efficiently prevented, and degradation of drivability can be efficiently prevented. [Solution] The present invention relates to a hybrid vehicle, comprising: an engine 1; and a motor 2 capable of assisting rotation of the engine 1 via a belt 3. The hybrid vehicle includes: a drive control unit 31 capable of switching a mode between a motor drive mode and an engine drive mode; and a torque setting unit 32 configured so as to set a limitation torque E, the limitation torque E being a threshold value for limiting a torque output from the motor 2 to be capable of preventing slippage of the belt 3. The drive control unit 31 switches the mode to the engine drive mode and inhibits switching to the motor drive mode, when the request drive torque T is greater than the limitation torque E during the motor drive mode.
The present invention is an oil gutter (9) for a transmission in which an oil passage surrounded by a bottom wall and side walls protruding upward from the bottom wall is formed, and the oil gutter for a transmission includes: a collecting portion (90) into which lubricating oil scooped up from a lower portion of a transmission is to flow; and a feed end portion (95) configured to feed lubricating oil to a shaft end of a transmission shaft (3) that supports a transmission gear, in which an intermediate storage portion (93a, 91), at which the bottom wall is located lower than a first bottom wall portion (90a) that is the bottom wall at the collecting portion and a second bottom wall portion (95a) that is the bottom wall at the feed end portion, is provided between the collecting portion and the feed end portion. Moreover, the oil gutter includes a penetrating portion (96) penetrating in the upper-lower direction, and a part of a shift device (7) that transmits shift operation of the transmission is located in the penetrating portion.
A display device can include a substrate (110) having an active area (AA) and a peripheral area (Bezel) surrounding the active area (AA); a camera hole (CH) disposed in the active area (AA) of the substrate (110); a plurality of subpixels (SP) disposed in the active area (AA) while being spaced apart from the camera hole (CH) by a first distance, the plurality of subpixels (SP) including a plurality of light emitting layers, respectively; and at least one organic common layer (141, 143) disposed on or under the plurality of light emitting layers, in which the at least one organic common layer (141, 143) includes an intermittent portion corresponding to a second distance from the camera hole (CH), the second distance being less than or equal to the first distance.
The present subject matter relates to a method for detecting a contamination of an exhaust gas sensor. Therein, an integral of a signal (S) of the exhaust gas sensor in a first-time period (At1) is set in a ratio with an integral of the signal (S) of the exhaust gas sensor in a second-time period (At2) following the first period (At1). The contamination is detected by comparing the ratio with a ratio threshold.
A glass substrate and a method for manufacturing the glass substrate are provided. The glass substrate may include a base glass including SiC, Al2O3, and Li2O, and nanocrystals having an average diameter in a range from about 5 nm to about 10 nm, thereby exhibiting enhanced surface strength properties while maintaining good transmittance properties. The method may include a step of heat-treating a base glass, thereby providing a glass substrate having enhanced strength properties.
(54) Title of the invention: LEARNING METHOD, LEARNING DEVICE FOR DETECTING OBJECT USING EDGE IMAGE AND TESTING METHOD, TESTING DEVICE USING THE SAME

(57) Abstract:

A learning method for detecting a specific object based on convolutional neural network (CNN) is provided. The learning method includes steps of: (a) a learning device, if an input image is obtained, performing (i) a process of applying one or more convolution operations to the input image to thereby obtain at least one specific feature map and (ii) a process of obtaining an edge image by extracting at least one edge part from the input image, and obtaining at least one guide map including information on at least one specific edge part having a specific shape similar to that of the specific object from the obtained edge image; and (b) the learning device reflecting the guide map on the specific feature map to thereby obtain a segmentation result for detecting the specific object in the input image.

No. of Pages: 39 No. of Claims: 30
A display device includes a flexible display module having thereon a first display area and a second display area adjacent to the first display area, the flexible display module being foldable with respect to a boundary between the first display area and the second display area, and a supporter including a first supporter overlapping the first display area and a second supporter overlapping the second display area and below the flexible display module, the first supporter including a first base supporter having a rigid property, and a first light absorption part on an outer surface of the first base supporter, and the second supporter including a second base supporter having a rigid property, and a second light absorption part on an outer surface of the second base supporter.

No. of Pages : 58 No. of Claims : 22
The present disclosure relates to a display assembly (10), a method of using the display assembly (10), and an electronic device, which uses the display assembly (10), for detecting an identification surface (F1) of an object (F) (e.g., a fingerprint) using a detection signal, which penetrates the object (F) and reflects a target signal representative of at least part of the identification surface (F1) (e.g., the orthographic projection of the fingerprint) onto an identification area (11) on a display (1). A signal receiver (3) then detects the target signal. The target signal can be used by a processor to further authenticate whether it corresponds to an authorized user. The display assembly (10) includes a display (1) having an identification area (11), a signal transmitter (2) configured to generate a detection signal when an object (F) is within a preset distance of the identification area (11), and a signal receiver (3) configured to detect the target signal.
(54) Title of the invention : LEARNING METHOD, LEARNING DEVICE FOR DETECTING OBSTACLES AND TESTING METHOD, TESTING DEVICE USING THE SAME

(57) Abstract:
A method for learning parameters of a CNN capable of detecting obstacles in a training image is provided. The method includes steps of: a learning device (a) receiving the training image and instructing convolutional layers to generate encoded feature maps from the training image; (b) instructing the deconvolutional layers to generate decoded feature maps; (c) supposing that each cell of a grid with rows and columns is generated by dividing the decoded feature map with respect to a direction of the rows and the columns, concatenating features of the rows per column in a direction of a channel, to generate a reshaped feature map; (d) calculating losses referring to the reshaped feature map and its GT image in which each row is indicated as corresponding to GT positions where a nearest obstacle is on column from its corresponding lowest cell thereof along the columns; and (e) backpropagating the loss.
Title of the invention: ELECTRONIC APPARATUS, METHOD FOR CONTROLLING ELECTRONIC APPARATUS, AND STORAGE MEDIUM

Abstract:
An electronic apparatus, a method for controlling the electronic apparatus, and a storage medium. The electronic apparatus includes a display screen (120), an electrochromic component (124) arranged on the display screen (120), a functional component (190) covered by the electrochromic portion, and a control circuit (210) electrically connected to the electrochromic component (124) and configured to control the electrochromic component (124). When the functional component (190) is in an active state, the control circuit (210) controls to increase a light transmittance of the electrochromic component (124), such that the functional component (190) is able to acquire an optical signal transmitting through the electrochromic component (124); when the functional component (190) is in an idle state, the control circuit (210) controls to reduce the light transmittance of the electrochromic component (124), such that the functional component (190) is able to be hidden.
The present disclosure provides a method (300) in a Next Generation Core Control Function (NG-CCF) node for communication with a Next Generation Policy Control Function (NG-PCF) node. The method (300) comprises: communicating (S310) network related parameters with the NG-PCF node via a direct interface between the NG-CCF node and the NG-PCF node.

![Diagram](image_url)
## STEEL SHEET FOR CARBURIZATION AND PRODUCTION METHOD FOR STEEL SHEET FOR CARBURIZATION

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### Name of Applicant
1. NIPPON STEEL CORPORATION
   - Address: 6-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo 1008071 Japan

### Name of Inventor
1. TODA, Yuri
2. HIKIDA, Kazuo
3. HASHIMOTO, Motonori

### Abstract
Provided are a steel sheet for carburization that demonstrates even superior ultimate ductility prior to carburization and a production method therefor. This steel sheet contains in mass% 0.02% to less than 0.30% C, 0.005% to less than 0.5% Si, 0.01% to less than 3.0% Mn, no more than 0.1% P, no more than 0.1% S, 0.0002% to 3.0% sol. Al and no more than 0.2% N with the remainder comprising Fe and impurities. The average value of the ratios of X-ray diffraction intensity in a random sample of the \{100\}<011> to \{223\}<110> orientation group of ferrite grains is no higher than 7.0. The average circle equivalent diameter of carbides is no larger than 5.0 µm. The proportion of the number of carbides with an aspect ratio of no higher than 2.0 is at least 80% relative to all of the carbides and the proportion of the number of carbides present within the ferrite grains is at least 60% relative to all of the carbides.

**No. of Pages:** 49  **No. of Claims:** 4
Provided are a steel sheet for carburizing having excellent ductility and a production method therefor. This steel sheet contains by mass% 0.02% to less than 0.30% C 0.005% to less than 0.5% Si 0.01% to less than 3.0% Mn not more than 0.1% P not more than 0.1% S not more than 0.1% Al not more than 0.2% N and 0.010% to 0.150% Ti with the remainder comprising Fe and impurities. The number of carbides per 1000 µm² is not more than 100. The percentage of carbides having an aspect ratio of 2.0 or less is 10% or more relative to all carbides. The average circle equivalent diameter of the carbides is not more than 5.0 µm and the average crystal grain size of ferrite is not more than 10.0 µm.
The present invention is a system for producing an ester composition, comprising an integrated reactor, a gas-liquid separation column, a refining unit, an alcohol storage tank, and a mixed alcohol separation column, and the purpose of the present invention is to provide a system for producing an ester composition, which is efficient, economical and simplified. The present invention can provide a simplified system for producing an ester composition, which, by introducing an integrated reactor allowing a production reaction of an ester compound and a production reaction of an ester composition to be performed in one space, a mixed alcohol separation column and a gas-liquid separation column, can reduce facility space, significantly reduce reaction facilities, and save transfer time. The present invention can also provide a method for producing an ester composition by using the system.
The present invention provides: an ethylene vinyl acetate copolymer, which has a high degree of crosslinking even with a reduced amount of a crosslinking agent used, by controlling the temperature and the heat of polymerization in an autoclave reactor at the time of polymerization; and a preparation method therefor.
The present invention provides pharmaceutical compositions comprising an antiseptic and a steroid, useful for treating a clinical symptom in a patient's airway (e.g., nose, lung, and sinus), wherein a gel containing the antiseptic is formed in situ upon instillation of the compositions onto a body cavity of a subject, as well as methods for using the same.
A method for estimating a mileage of a vehicle is disclosed. The method includes detecting a first location of the vehicle at a first moment by capturing an image of the vehicle by a first camera of a plurality of cameras, and estimating a primary distance of a plurality of distances. The primary distance may be associated with the first location.

**FIG. 1**

No. of Pages : 20  No. of Claims : 20
Title of the invention: AL-RICH AITIN-BASED FILMS

Abstract:
This invention relates to a coating comprising at least one AlTiN-based film deposited by means of a PVD process wherein the at least one AlTiN-based film deposited is comprising an Al-content - in relation to the Ti-content - in atomic percentage higher than 75 % and wherein the AlTiN-based film exhibits solely a crystallographic cubic phase and internal compressive stresses and this invention relates to a method involving deposition of an AlTiN-based film.

No. of Pages: 27 No. of Claims: 16
Title of the invention: FASTENER FOR PERSONAL ACCESSORY ETC.

Abstract:
Provided is a fastener comprising a pair of a depression part 1 and a protrusion part 2. The depression part 1 comprises: a retaining frame body 12; a retaining space 13 surrounded by the retaining frame body 12; an aperture part 14 on a leading end of the retaining frame body 12 the aperture part configured to close elastically; and an insertion guide part 15 positioned externally to the aperture part 14. The depression part 2 comprises: a ring-shaped latch frame body 22; a latch acceptance part 25 constituted by a space surrounded by the latch frame body 22; a latch part 21 on a leading end of the latch frame body 22 the latch part being configured to close elastically; a latching-separation guide part 23 positioned to the inner side of the latch part 21; and an outer shell body 57 positioned on the outer circumference of the latch frame body 22. Locking is enabled by pressing the outer side of the latch part 21 of the protrusion part 2 on the insertion guide part 15 of the depression part 1. Disengagement is enabled by bringing the inner side of the aperture part 14 of the depression part 1 into contact with the latching-separation guide part 23 of the protrusion part 2 and pulling same in the opposite direction to the direction of the insertion while twisting same.
**Title of the invention:** A VIDEO IMAGE PROCESSING METHOD AND DEVICE

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**Abstract:**
Disclosed in embodiments of the present disclosure are a method and a device for processing a video image, which improves the encoding speed and reduces the computational complexity in the case of ensuring video compression performance. The method comprises: performing integer pixel motion estimation on the target image frame to obtain an optimal position estimated by the integer pixel; performing a one-half pixel estimation on the optimal position estimated by the integer pixel to obtain an optimal position estimated by the one-half pixel; dividing the surrounding area of the optimal position estimated by the one-half pixel into four partitions; determining a first partition used for a quarter-pixel estimation from four partitions on the basis of rate-distortion costs corresponding to four one-half pixel positions adjacent to the optimal position estimated by the one-half pixel; performing the quarter-pixel estimation in the first partition according to the optimal position estimated by the one-half pixel, to obtain the optimal position estimated by the quarter-pixel; and using the optimal position estimated by the quarter-pixel as a motion estimation result for motion compensation.

No. of Pages : 31 No. of Claims : 19
A system for communicating health data in a healthcare environment (1) comprises a communication network (4) for communicating health data in the healthcare environment (1), a reporting device (2) for transferring health data via the communication network (4), and a consuming device (3) for receiving health data from the reporting device (2) via a communication channel (41) of the communication network (4). Herein, the consuming device (3), for receiving health data from the reporting device (2), is constituted to send a subscription request message (A1) containing a subscription request to the reporting device (2), and that the reporting device (2) is constituted, upon receiving the subscription request message (A1), to validate the subscription request and to establish the communication channel (41) to transfer health data to the consuming device (3). In this way a system is provided which may allow for an easy connection of a consuming device to a network with the possibility to reduce the data load and to improve a backup handling.
Title of the invention: SYSTEMS AND METHODS FOR AUTOMATIC ESTIMATION OF OBJECT CHARACTERISTICS FROM DIGITAL IMAGES

Abstract:
Methods and systems for automatic estimation of object characteristics from a digital image are disclosed, including a method comprising sub-dividing into two or more segments a digital image comprising pixels and depicting an object of interest, wherein each segment comprises two or more pixels; assessing content depicted in one or more of the segments for a predetermined object characteristic using machine learning techniques comprising General Image Classification of the one or more segments using a convolutional neural network, wherein the General Image Classification comprises analyzing the segment as a whole and outputting a general classification for the segment as a whole as related to the one or more predetermined object characteristic; and determining a level of confidence of one or more of the segments having the one or more predetermined object characteristic based on the General Image Classification assessment.
The invention relates to multispecific antibodies, and antigen binding fragments thereof, that specifically bind to distinct Zika virus epitopes and potently neutralize infection of ZIKV. The invention also relates to nucleic acids that encode such antibodies and antibody fragments. In addition, the invention relates to the use of the antibodies and antibody fragments of the invention in prophylaxis and treatment of ZIKV infection.
Title of the invention: BUS BAR ASSEMBLY FOR ELECTRODE LEAD BONDING AND BATTERY MODULE INCLUDING SAME

Abstract:
Disclosed is a bus bar assembly of the present invention. A bus bar assembly of the present invention is a bus bar assembly electrically connecting a plurality of battery cells each of which includes an electrode lead, and comprises: a fixed bus bar arranged in a rod conductor form; a pair of movable bus bars arranged to be spaced apart from both sides of the fixed bus bar located in the middle between the movable bus bars, to form a fitting space between the fixed bus bar and each of the movable bus bars wherein at least one electrode lead can be inserted in the fitting space; and a close contact member which, in a state where the electrode lead is disposed in the fitting space, moves the pair of movable bus bars close to the fixed bus bar and then brings the electrode lead into close contact with the fixed bus bar.
**Title of the invention :** POLYOLEFIN MICROPOROUS MEMBRANE

| (51) International classification: | C08J 9/26 |
| (31) Priority Document No: | 2017-167950 |
| (32) Priority Date: | 31/08/2017 |
| (33) Name of priority country: | Japan |
| (86) International Application No: | PCT/JP2018/032496 |
| Filing Date: | 31/08/2018 |
| (87) International Publication No: | WO/2019/045077 |
| (61) Patent of Addition to Application Number: | NA |
| Filing Date: | NA |
| (62) Divisional to Application Number: | NA |
| Filing Date: | NA |

**Abstract:**
A polyolefin microporous membrane has a piercing elongation of 2.30 mm or lower and the temperature of the stress variation point is 80.0°C or higher and the stress peak value is 1.8 g or lower in thermomechanical analysis (TMA) of the width direction of the polyolefin microporous membrane.

**No. of Pages:** 34  **No. of Claims:** 11
**Title of the invention:** TERMINAL DEVICE, BASE STATION DEVICE, AND COMMUNICATION METHOD

**Abstract:**
This terminal device is provided with a media access control layer processing unit which manages a HARQ process and a physical layer processing unit which performs processing relating to PUSCH transmission in a physical layer. A first HARQ process set in the terminal device determines, at least on the basis of whether transmission of the first HARQ process and transmission of a second HARQ process are being generated at the same transmission time, whether the physical layer processing unit is to be instructed to generate transmission of the first HARQ process, wherein the transmission of the second HARQ process is scheduled to use a short processing time.
### Title of the invention: A REUSABLE BIN ASSEMBLY

**Abstract:**
A bin assembly including: a container having a base and sidewalls extending upwardly and outwardly from the base; at least one locking portion disposed on the base; a pallet; and at least one locking mechanism disposed on the pallet, complementary to the at least one locking portion, wherein relative rotation between the container and the pallet engages or disengages the at least one locking portion and at least one locking mechanism to respectively lock or unlock the pallet and the container.

**Name of Applicant:**
1. KENNETH R MORAS PTY LTD
   - Address: 29 Elizabeth Street Wetherill Park, NSW 2164 Australia

**Name of Inventor:**
1. HOLM, Jason
2. RAFFERTY, John

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- **Priority Date:** 31/08/2017
- **Name of priority country:** Australia

**International Application No.:** PCT/AU2018/000159
- **Filing Date:** 31/08/2018

**International Publication No.:** WO/2019/040968
- **Filing Date:** NA

**Patent of Addition to Application Number:** NA
- **Filing Date:** NA

**Divisional to Application Number:** NA
- **Filing Date:** NA

**No. of Pages:** 11
**No. of Claims:** 19
The present invention is provided with: a reception unit that receives a PDCCH including downlink control information; and a transmission unit that transmits a sPUSCH at least on the basis of detection of the PDCCH. The sum of the number of symbols in which the sPUSCH is mapped and the number of SC-FDMA symbols in which a DMRS related to the sPUSCH is mapped is 2 and/or 3. When a CRC added to the downlink control information is scrambled by a C-RNTI, the index of the SC-FDMA symbol in which the DMRS related to the sPUSCH is mapped is given at least on the basis of the downlink control information. When the CRC added to the downlink control information is scrambled by a SPS C-RNTI, the index of the symbol in which the DMRS related to the sPUSCH is mapped is given at least on the basis of a signal of an upper layer.
Innovation develops the concept, how to use the available natural resources for cultivation and selective fish catching, in technically feasible and technologically acceptable way. For example, bays can be used using an innovative barrier, which would provide a natural place for fish breeding. In such formed natural habitat, which could be additionally positioned along the shores of the lake or river, innovative feeders would be installed. Innovative feeders would allow for constant feeding of fish. Where the fish would be grown in the open waters, while self-serving in the feeders, at a time when it fits them the most. Innovative technology for selective fish capturing has been developed. In such a way that the fish calibrates itself in size when catching with a platform, basket, cage, cylinder-shaped rotating catcher, and other forms of application of innovative technology. Thus, ecology is not disturbed, no excessive material resources are spent, otherwise now required for the sailing of excessive and unprofitable fishing vessels. Instead of the current fish catching nets, feeding traps would catch the big fish, while the tiny fish would pass through passages in the perforated canvas or net, construction. Fish capturing constructions have the possibility of automatic or semi-automatic workflow management. Work processes are connected to shore and ship via the signal.
Title of the invention: MULTILAYER FILMS AND LAMINATES CONTAINING SLIP AGENTS

Abstract:
The coextruded multilayer film has at least two layers, including a sealant layer and a second layer in contact with the sealant layer. The sealant layer contains (A) a first ethylene-based polymer having a density from 0.865 g/cc to 0.930 g/cc and a melt index from 0.5 g/10 min to 25 g/10 min; (B) an unsaturated primary fatty acid amide having a melting point of 100°C or less; and (C) a saturated primary fatty acid amide having a melting point greater than 100°C. The unsaturated primary fatty acid amide and the saturated primary fatty acid amide have a weight ratio of from 3:1 to 1:6. The second layer contains a second ethylene-based polymer. The present disclosure also provides a laminate containing said sealant layer.

No. of Pages: 34  No. of Claims: 15
IMPLEMENTATION OF BIOMETRIC AUTHENTICATION

Abstract:
The present disclosure relates generally to implementing biometric authentication, including providing user interfaces for: a biometric enrollment process tutorial, aligning a biometric feature for enrollment, enrolling a biometric feature, providing hints during a biometric enrollment process, application-based biometric authentication, autofilling biometrically secured fields, unlocking a device using biometric authentication, retrying biometric authentication, managing transfers using biometric authentication, interstitial user interfaces during biometric authentication, preventing retrying biometric authentication, cached biometric authentication, autofilling fillable fields based on visibility criteria, automatic log-in using biometric authentication, retrying biometric authentication at a credential entry user interface, providing indications of error conditions during biometric authentication, providing indications about the biometric sensor during biometric authentication, and orienting the device to enroll a biometric feature.
Title of the invention: ACESULFAME POTASSIUM COMPOSITIONS AND PROCESSES FOR PRODUCING SAME

(51) International classification : C07D 291/06
(31) Priority Document No : 62/397,540
(32) Priority Date : 21/09/2016
(33) Name of priority country : U.S.A.
(86) International Application No : PCT/US2017/051507
    Filing Date : 14/09/2017
(61) Patent of Addition to Application Number : NA
    Filing Date : NA
(62) Divisional to Application Number : 201717041713
    Filed on : 21/11/2017

(57) Abstract:
Improved processes for producing high purity acesulfame potassium. In one embodiment, the process comprises the steps of contacting a solvent, e.g., dichloromethane, and a cyclizing agent, e.g., sulfur trioxide, to form a cyclizing agent composition and reacting an acetoacetamide salt with the cyclizing agent in the composition to form a cyclic sulfur trioxide adduct. The contact time is less than 60 minutes. The process also comprises forming from the cyclic sulfur trioxide adduct composition a finished acesulfame potassium composition comprising non-chlorinated, e.g., non-chlorinated, acesulfame potassium and less than 35 wppm 5-halo acesulfame potassium, preferably less than 5 wppm.

No. of Pages : 40  No. of Claims : 11

FIG. 1
Disclosed in the present invention is a FLEXE service-based cell exchange method, relating to the field of communications, the method comprising the following steps: sequentially segmenting, at a sending terminal, a FLEX data code stream into several slice packets, and inserting a packet overhead with a time stamp into the slice packet; a receiving terminal caching a received slice packet, parsing the packet overhead before or after caching the slice packet, to obtain the time stamp of the slice packet, and obtaining a path latency of the slice packet according to the time stamp of the slice packet and the time when the receiving terminal has received the slice packet, determining whether the path latency of the slice packet exceeds a preset maximum line latency, if not, reading the slice packet, removing the packet overhead of the slice packet, and then recombining the payloads of the slice packets, and if so, sending an alert signal. The cell exchange method implementing ultra low latency on the basis of a FLEX service provided by the present invention caches and forwards slice packets after slicing processing, thereby achieving high transmission efficiency and reliability.

No. of Pages : 18 No. of Claims : 10
Disclosed are a path finding method and system for multiple layers of shortest routes between a source network element and a sink network element, relating to the technical field of telecommunication transmission network management. The method comprises the steps of: S1: determining an output port and an input port of each network element through which the outermost path passes, wherein the source network element is a start network element, and the sink end network element is an end network element; S2: determining a start network element and an end network element of each layer of path according to each network element through which the outermost path passes; and S3: forming the shortest route of the layer of path according to the start network element and the end network element of each layer of path, and the input port and output port of each network element through which the layer of path passes. According to the present invention, the path finding method for the shortest route of each layer of path can be unified, and thus the completeness of the shortest path between the source network element and the sink network element can be guaranteed, user requirements are fully met, and the method is suitable for popularization.
A cylinder device (C1) according to the present invention comprises: a cylinder (2); a rod (4) inserted into the cylinder (2); a piston (3) that is slidably inserted into the cylinder (2), is connected to the rod (4) and partitions the inside of the cylinder (2) into a rod-side chamber (5) and a piston-side chamber (6); a tank (8); a discharge passage (21) that causes the rod-side chamber (5) to communicate with the tank (8); a relief valve (22) provided in the discharge passage (21); and an attenuation unit (23) that causes a larger pressure loss than the relief valve (22) when the speed of the piston (3) relative to the cylinder (2) becomes equal to or higher than a predetermined speed.
Disclosed is an electronic device. The electronic device comprises a cover glass, a back cover facing the cover glass, a housing surrounding a space between the cover glass and the back cover, a bezel surrounding an edge of a plane arranged below the cover glass; a display panel including a first area that is exposed through an area of the cover glass not overlapping the bezel and a second area that surrounds the first area and is arranged below the bezel, a first group of screen pixels arranged along an edge of the first area; a second group of screen pixels arranged in an area except for the first area; a display driver integrated circuit electrically connected to the second group pixels, and a processor controlling, through the display driver integrated circuit, whether to allow the second group pixels to emit light.
The present invention is a method for removing a primary alcohol in esterification, in comparison to the conventional methods, which comprises: a step of reacting, in an esterification reactor comprising a liquid exit line connected to a liquid section in the reactor, a primary alcohol with a carbonyl-based compound having one or more functional groups selected from the group consisting of a carboxyl group, an ester group and an acid anhydride group; and a step of removing the primary alcohol by way of gas-liquid separation in a gas-liquid separation column, wherein the introduction of a liquid stream into the gas-liquid separation column starts at 10% to 70% of the total required time required for the gas-liquid separation. By controlling the time at which the liquid stream is discharged through the liquid exit line in the gas-liquid separation, the content of a low boiling point mixture containing an unreacted alcohol in the reactor can be reduced to a desired level within a short time, and the reactions of direct esterification and transesterification can be combined into one process, accordingly.
New polypropylene composition which provides an excellent balance between mechanical properties, optical behaviour and low amounts of extractable substances combined with good retortability.
Title of the invention: METHOD AND COMPOSITION TO CONTROL RUMEN RELEASE OF COBALT TO RUMEN BACTERIA FOR MAKING VITAMIN B12

Abstract:
A method and composition which is a unique source of cobalt for enhanced production of Vitamin B12 in the rumen. It has the advantage of a slow release source of cobalt combined with a fast release source of cobalt. The fast cobalt ion release source which is a soluble source of cobalt is turned over faster in the rumen than the insoluble cobalt sources are turned over.

No. of Pages: 15
No. of Claims: 14
The invention relates to a bone implant (1) for correcting an incorrect position of a bone, the bone implant (1) having a first portion (2) for attachment to a first bone portion (3) of the bone and a second portion (4) for attachment to a second bone portion (5) of the bone, the bone implant (1) being prepared so that, when fixed to the bone, it orients the first bone portion (3) and the second bone portion (5) with respect to one another and keeps said portions at a distance from one another, the bone implant (1) having such a geometry and being adapted such that the bone implant (1) can be inserted between the first bone portion (3) and the second bone portion (5) so as to force a predetermined orientation of the second bone portion (5) relative to the first bone portion (3). The invention also relates to a method for producing such a bone implant (1), in which method a geometry of the bone implant (1) is calculated in one step for correcting an incorrect position of a bone, the geometry is broken down into defined layers in a subsequent step, and then, in a subsequent step, the layers are produced, then stacked one on top of the other and connected to one another.

No. of Pages : 12  No. of Claims : 10
Provided is a zinc hot-dipped steel sheet having a zinc hot-dipped layer on at least one side of the parent material steel sheet, characterized in that: the Fe content of the zinc hot-dipped layer exceeds 0% but does not exceed 3.0%, and Al content exceeds 0% but does not exceed 1.0%; the zinc hot-dipped steel sheet has an Fe-Al alloy layer at the interface between the zinc hot-dipped layer and the parent material steel sheet; the thickness of the Fe-Al alloy layer is 0.1-2.0 µm; the difference between the maximum and minimum values for the thickness of the Fe-Al alloy layer in the width direction of the parent material steel sheet is within 0.5 µm; within the parent material steel sheet there is a refined layer which is in direct contact with the Fe-Al alloy layer; the average thickness of the refined layer is 0.1 µm to 5.0 µm, the average particle size of the ferrite phase within the refined layer is 0.1 µm to 3.0 µm; the refined layer contains or more types of oxides of Si and Mn; the maximum diameter of the oxides is 0.01 µm to 0.4 µm; and the difference between the maximum and minimum values for the thickness of the refined layer in the width direction of the parent material steel sheet is within 2.0 µm.
Disclosed herein are interleukin (IL) conjugates (e.g., IL-2 conjugates) and use in the treatment of one or more indications. Also described herein are pharmaceutical compositions and kits comprising one or more of the interleukin conjugates (e.g., IL-2 conjugates).
A device to be charged, and a wireless charging method and system; the device to be charged comprises: a battery; a wireless receiving circuit that is used to receive an electromagnetic signal emitted by a wireless charging apparatus and convert the electromagnetic signal into an output voltage and output current of the wireless receiving circuit; a step-down circuit that is used to receive the output voltage of the wireless receiving circuit and perform voltage reduction processing on the output voltage of the wireless receiving circuit so as to charge the battery; a detection circuit that is used to detect the voltage and/or current that enters the battery; and a control circuit that is used to communicate with the wireless charging apparatus according to the voltage and/or current detected by the detection circuit such that the wireless charging apparatus regulates an emission power step-down circuit of the electromagnetic signal.

No. of Pages : 42 No. of Claims : 15
A technique for operating an RSP node (100), which is configured for remote subscriber identity module, SIM, provisioning, RSP, and comprises or is connectable to an interface (502) for communication with an MNO node (200) of a mobile network operator, MNO, is described. As to a method aspect of the technique, a download order message from the MNO node (200) is received through the interface (502). The download order message includes data (604) for generating a SIM profile (602). The SIM profile (602) is generated in response to the download order message according to the data (604) received for generating the SIM profile (602). A result (606) of the SIM profile generation is sent through the interface (502) to the MNO node (200).
Disclosed herein, in part, is a pharmaceutical formulation comprising isotretinoin or a pharmaceutically acceptable salt thereof, and a mucoadhesive polymer. A method of treating a mucosal disease comprising administering a disclosed pharmaceutical formulation to a subject in need thereof is also provided herein.

No. of Pages : 51 No. of Claims : 33
The invention relates to a crane, in particular a rotary tower crane, comprising a lifting cable (207) which runs out from a crane boom (202) and has a load receiving means (208), drive devices for moving multiple crane elements and displacing the load receiving means (208), a controller (3) for controlling the drive devices such that the load receiving means (208) is displaced along a movement path, and a pendulum damping device (340) for damping pendulum movements of the load receiving means (208) and/or of the lifting cable (207). The pendulum damping device (340) has a pendulum sensor system (60) for detecting pendulum movements of the lifting cable (207) and/or of the load receiving means (208) and a regulator module (341) comprising a closed control loop for influencing the actuation of the drive devices depending on a pendulum sensor system (60) signal returned to the control loop. The invention is characterized in that the pendulum damping device (340) has a structural dynamic sensor system (342) for detecting deformations and/or dynamic inherent movements of structural components of the crane, and the regulator module (341) of the pendulum damping device (340) is designed to take into consideration both the pendulum signal of the pendulum sensor system (60) as well as the structural dynamic signals which are returned to the control loop and specify deformations and/or dynamic inherent movements of the structural components, while influencing the actuation of the drive devices. The invention also relates to a corresponding method for controlling a crane, in particular a rotary tower crane, the load receiving means (208) of which, said means being attached to a lifting cable (207), are displaced by drive devices that are actuated by a controller (3) of the crane, wherein the actuation of the drive devices is influenced by a pendulum damping device (340) comprising a regulator module (341) with a closed control loop depending on pendulum-relevant parameters.
According to some embodiments, a method for use in a wireless transmitter of encoding a transport block comprises, upon determining a code rate for transmitting a transport block is less than or equal to $R_{\text{threshold}}$ ($R_{\text{threshold}}$ is between 1/5 and 1/3), selecting new radio (NR) low-density parity-check (LDPC) base graph 2 for encoding the transport block. Otherwise, the method comprises selecting NR LDPC base graph 1 for encoding the transport block, unless a transport block size (TBS) of the transport block is less than or equal to a size threshold ($X$) and a code rate for transmitting the transport block is less than or equal to 2/3, in which case the method may comprise selecting base graph 2. The method further comprises encoding the transport block using the selected base graph and transmitting the encoded transport block to a wireless receiver.
A pre-compressed emergency air spring assembly, comprising: an upper cover plate (1), an air bag (2), an upper end plate (3) and a lower end plate (4); the outer periphery of the upper end plate (3) is connected to the outer periphery of the lower end plate (4) by means of the air bag (2); a top portion of the upper end plate (3) is provided with a lateral pre-compression chamber (31) and a lateral pre-compression plate (32) that is disposed at a lateral opening of the lateral pre-compression chamber (31); a pressed spring elastic body (5) is pressedly provided within the lateral pre-compression chamber (31) by means of the lateral pre-compression plate (32), and a plurality of steel springs (6) are pressedly provided along the circumferential direction of the pressed spring elastic body (5) between the upper cover plate (1) and the upper end plate (3); the upper cover plate (1) is sleeved on the periphery of the lateral pre-compression chamber (31). The air spring assembly has the advantages of having a simple structure, being convenient to install, having low vertical stiffness under a heavy load, having large vertical deformation, having a high comfort level, being highly stable, being capable of preventing creep, and being capable of achieving soft stop.
A steam generating system includes a nozzle assembly for pulverized coal and air, the coal nozzle assembly comprises an inner housing (3) for conveying primary air and coal and an outer housing (5) for conveying secondary air to an exit face (13) of a nozzle tip (1), wherein the outer housing (3) and the inner housing (5) are arranged coaxially and limit a channel (15) for the secondary air, wherein the cross-sectional area (AIH) of the inner housing (3) increases towards the exit face (13) of the nozzle tip (1), wherein the cross-sectional area (AOH) of the outer housing (5) decreases towards the exit face (13), and wherein bars (11) are located in the inner housing (3) near the exit face (13) that accelerate the velocity of the primary air and coal particles.
Title of the invention: METHOD OF SOLID-PHASE NUCLEIC ACID SYNTHESIS AND SOLUTION COMPOSITION FOR SOLID-PHASE NUCLEIC ACID SYNTHESIS

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Abstract:
By elucidating and making use of a novel solvent for replacing toluene in the deprotection step of a solid phase nucleic acid synthesis method, the present invention addresses the many problems associated with using toluene. A solid phase nucleic acid synthesis method in which protected nucleoside phosphoramidites in which a protecting group has been bonded to the 3' or 5' hydroxyl groups of the nucleosides are sequentially bonded on a solid support. A reaction that removes the protecting group from the protected nucleoside phosphoramidites is performed in a solution that contains acetonitrile and an acid that has a pKa of 0.20.8.

No. of Pages : 19 No. of Claims : 9
A steam generating system includes a furnace, a nozzle tip assembly for pulverized coal and primary air as well as means for conveying secondary air in the furnace. The nozzle according to the invention comprises a nozzle body (3) and several channels (5) being connected with the nozzle body, the channels are diverging from each other. At the exit faces (17) of the channels obstructions (13) are disposed to induce huge turbulences of the primary air when entering the furnace. Due to these turbulences the primary air and the entrained coal are mixed very well before being combusted in the furnace. This results in a better more effective combustion with reduced NOx-emissions.
Provided is a connector that is capable of improving contact reliability between a cable and a contact by increasing the pressure-contact accuracy of the cable in the contact. A connector (10) that holds a core wire of a cable by means of pressure-contact parts is provided with: a pair of fitting objects to be fitted to each other; a contact (50) that has a pair of pressure-contact parts and that is provided inside the fitting objects; a first partition wall (18b1) that is formed inside one of the fitting objects; and a second partition wall (33) that is formed inside the other fitting object, wherein the pressure-contact parts of the contact (50) are separated from each other, and partitioned from each other within the fitting objects, being fitted to each other, by the first partition wall (18b1) and the second partition wall (33).
The present invention provides resins for use as a sealant layer in a multilayer film, multilayer films, and packages formed from such films. In one aspect, a resin for use as a sealant layer in a multilayer film comprises (a) 10 to 30 weight percent low density polyethylene based on the total weight of the resin; (b) 60 weight percent or more of a random copolymer polypropylene based on the total weight of the resin; and (c) 5 to 25 weight percent of a crystalline block copolymer composite (CBC) comprising: i) a crystalline ethylene based polymer (CEP) comprising at least 90 mol % polymerized ethylene; ii) an alpha-olefin-based crystalline polymer (CAOP); and iii) a block copolymer comprising (1) a crystalline ethylene block (CEB) comprising at least 90 mol % polymerized ethylene and (2) a crystalline alpha-olefin block (CAOB).
A drive sprocket assembly (210) is provided. The drive sprocket assembly (210) includes at least one first segment (320) and at least one second segment (344). Each of the at least one first segment (320) and the at least one second segment (344) is adapted to be removably affixed to a hub (302) of the drive sprocket assembly (210). Each of the at least one first segment (320) and the at least one second segment (344) includes a top surface (324, 348) and an inner surface (326, 350) extending away from the top surface (324, 348). The inner surface (326, 350) includes a stepped configuration. The inner surface (326, 350) is adapted to at least partially abut a raised portion (308) of the hub (302) and an outer surface (306) of the hub (302). The drive sprocket assembly (210) also includes a tooth segment (338, 364) provided on the top surface (324, 348) of each of the at least one first segment (320) and the at least one second segment (344) respectively.
This invention relates to method and apparatus for extracting energy from water waves to generate electric power. The wave energy converter utilizes sea wave oscillations, from a land-based position. It comprises a land-based power take off apparatus (3) that is oscillated by waves conveyed to it by canal or tunnel. The canal has a funnel shaped intake (1) at the coastline, a wave control gate (9) positioned near the intake and a power take off apparatus (3) positioned inland across the canal with a float (8) that works pumping cylinders (7) that pump hydraulic fluid to turn an impulse turbine (5) coupled to an electricity generator to generate electricity. The canal depth is predetermined to float the float, of the power take off apparatus (3), at all tide levels. On the aft side of the float the canal traces a path looped back (4) to the fore side of the float to include extraction of residual wave power.
An example device capable of predicting print substance end-of-life (EOL) comprises a container to hold a print substance, the container comprising a refill port through which print substance is to be introduced into the container. The example device also comprises a processor to receive signals indicative of an amount of print substance introduced via the refill port. The processor is also to predict a print substance end-of-life (EOL) based on the amount of print substance introduced.
**Title of the invention**: PROCESS FOR THE PREPARATION OF 1,2 SYNDIOTACTIC POLYBUTADIENE IN THE PRESENCE OF A CATALYTIC SYSTEM COMPRISING A COBALT COMPLEX WITH A PHOSPHINE LIGAND

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**Abstract**:

Process for the preparation of 1,2 syndiotactic polybutadiene comprising polymerizing 1,3-butadiene in the presence of a catalytic system comprising: at least one cobalt complex with a phosphine ligand having general formula (I): wherein: R1, R2 and R3, mutually identical or different, are selected from branched C4-C20 alkyl groups, preferably C4-C15, C6-C30 cycloalkyl groups, preferably C6-C15, C6-C30 aryl groups, preferably C6-C15, optionally substituted; provided that at least two of R1, R2 and R3 are selected from C6-C30 aryl groups, preferably C6-C15, optionally substituted; X1 and X2, mutually identical or different, represent a halogen atom such as, for example, chlorine, bromine, iodine; at least one aluminoxane having general formula (II): (R4)2-Al-[Al(R5)-0]m-Al-(R6)2 (II) wherein R4, R5 and R6, mutually identical or different, represent a hydrogen atom, or a halogen atom such as, for example, chlorine, bromine, iodine, fluorine; or are selected from linear or branched C1-C20 alkyl groups, cycloalkyl groups, aryl groups, said groups being optionally substituted with one or more silicon or germanium atoms; and m is an integer ranging from 0 to 1000; said process being carried out at a temperature ranging from 0°C to +60°C, preferably ranging from 0°C to +30°C.

No. of Pages : 37 No. of Claims : 7
The present disclosure provides antibody sequences found in antibodies that bind to human CD38. In particular, the present disclosure provides sequences of anti-human CD38 antibodies. Antibodies and antigen-binding portions thereof including such sequences present features compatible with pharmaceutical manufacturing and development can be provided as fully human antibodies (e.g., fully human monoclonal antibodies or antigen-binding fragments) that can be useful for medical methods and compositions, in particular for treating cancer.
The invention relates to a method (S) for attaching an SMD to a printed circuit (10), comprising the following steps: - applying an insulating layer (20) (S1) onto the printed circuit (10), - forming a cavity (22) in the insulating layer (20) above the conductive layer (12) (S2) of the printed circuit, - filling the cavity (22) with a solder paste (3), - positioning the SMD over the cavity (22) (S4), and - applying a heat treatment (S5) to the printed circuit (10).
The present invention relates to compounds of formula (I): Formula (I) wherein Q is selected from O or S; R1 is a saturated or unsaturated, optionally substituted hydrocarbyl group optionally including one or more heteroatoms N, O or S; and R2 is a cyclic group substituted at the α-position with a monovalent heterocyclic 10 group or a monovalent aromatic group, wherein a ring atom of the heterocyclic or aromatic group is directly attached to the α ring atom of the cyclic group, wherein the heterocyclic or aromatic group may optionally be substituted, and wherein the cyclic group may optionally be further substituted. The present invention further relates to salts, solvates and prodrugs of such compounds, to pharmaceutical compositions comprising such compounds, and to the use of such compounds in the treatment and prevention of medical disorders and diseases, most especially by the inhibition of NLRP3.
Title of the invention: METHOD OF CONJUGATION OF CYS-MABS

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<td>1) AMGEN INC.</td>
<td>One Amgen Center Drive Thousand Oaks, California 91320-1799 U.S.A.</td>
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<td>1) ACHMATOWICZ, Michal</td>
<td>2) ROMANINI, Dante</td>
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<td>3) FALSEY, James R.</td>
<td>4) HERBERICH, Bradley J.</td>
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<td>5) THIEL, Oliver R.</td>
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Abstract:
The present disclosure relates to a method of capping, reducing, and oxidizing cys-mAbs in order to provide homogenous material for subsequent conjugation reactions. The present method demonstrates robust ways to manufacture conjugates of cysteine-engineered antibodies that offer high yield and consistent product quality.

No. of Pages: 68 No. of Claims: 40
(54) Title of the invention: NOVEL BRAF INHIBITORS AND USE THEREOF FOR TREATMENT OF CUTANEOUS REACTIONS

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(71) Name of Applicant:
1) LUTRIS PHARMA LTD.
   Address of Applicant: Building A, 27 Habarzel St. 6971039 Tel Aviv Israel

(72) Name of Inventor:
1) SHELACH, Noa

(57) Abstract:
The present invention discloses novel BRAf inhibitors, compositions comprising these inhibitors and uses thereof for the treatment, amelioration and/or prevention of cutaneous reactions.

No. of Pages: 60 No. of Claims: 51
A vascular access device may be an integrated catheter. The vascular access device includes a catheter (103) and catheter adapter (101) having a catheter hub (102) and side port (105). The contact angle of a probe is greater than 90 degrees. The entrance angle of a probe entering the catheter hub from the side port may be less than 45 degrees. The vascular access device may include a component configured to direct the path of a probe towards the catheter opening. The component may be a protrusion extending into the lumen of the side port, internal fluid passageway, and/or extension tube, or a septum within the catheter hub. The vascular access device includes an access adapter in fluid communication with the side port and permitting insertion of a probe into the catheter through the side port with or without a separate luer adapter. Methods of using a vascular access device are further disclosed.
**Title of the invention:** BUMPER BEAM AND VEHICLE

**Abstract:**
Provided is a vehicular bumper beam that is lightweight and highly strong. A vehicular bumper beam (1) is provided with a first member (2) and a second member (3). The first member (2) includes a first top plate part (5), two first vertical wall parts (6), and two first flange parts (7). The first top plate part (5) is flat in a cross-section perpendicular to the longitudinal direction. The second member (2) includes a second top plate part (4), two second vertical wall parts (8), and two second flange parts (9a, 9b). The second top plate part (4) has a protrusion (20) that protrudes in the direction opposite the first top plate part (5). The two second vertical wall parts (8) are connected to both side portions (4a, 4b) of the second top plate part (4), respectively. The two second vertical wall parts (8) are disposed inside the first member (2) so as to respectively face the first wall parts (6) from a close distance. The two second flange parts (9a, 9b) are connected to the two vertical wall parts (8), respectively, and disposed joined to the first flange parts (7), respectively.

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<td>(57) Abstract</td>
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No. of Pages: 30  No. of Claims: 8
Title of the invention: SYSTEM FOR APPLYING A BUILDING MATERIAL

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Abstract:
The invention relates to a system (1) for applying a building material, comprising: a first component (3) of the building material, comprising a first constituent (3.1) and a second constituent (3.2); a second component (4) of the building material; a first mixer (5.1) for mixing the first constituent (3.1) and the second constituent (3.2); a supply device (29) for supplying the first constituent (3.1) to the mixer (5.1); a movement device (2) for modifying a site of application in a space; and a second mixer (5.2) for mixing the first component (3) and the second component (4).

No. of Pages: 21  No. of Claims: 15
An invaginating device (10) includes an inner elongate member (12) and an outer flexible tube (14) with invaginated axial ends. The outer flexible tube is disposed at a first axial end of the inner elongate member; concentric with the inner elongate member; sized to provide a radial gap (24) there between; sealably connected at the axial ends of the outer flexible tube to the inner elongate member, with the axial spacing between such sealed axial ends being less than the axial length of the outer tube; and extendable to protrude from the first axial end of the inner elongate member and retractable to reduce such protrusion from the first axial end of the inner elongate member. Fluid contained within the radial gap (24) defined between the inner elongate member and the outer flexible tube is either pressurized or a non-compressible fluid. An actuator (16) is movable relative to the inner elongate member; and engageable with the outer flexible tube to extend the outer flexible tube relative to the first axial end of the inner elongate member.
Communication is performed more reliably. A CCI (I3C DDR) processing section determines status of an index when requested to be accessed by an I3C master for a read operation. An error handling section then controls an I3C slave 13 to detect occurrence of an error based on the status of the index and to neglect all communication until DDR mode is stopped or restarted by the I3C master, the I3C slave 13 being further controlled to send a NACK response when performing acknowledge processing on a signal sent from the I3C master. This technology can be applied to the I3C bus, for example.
Systems and methods for managing excessive intake flow path pressure and counter flow are implemented to support enhanced engine braking applications, such as 2-stroke or 1.5-stroke engine braking implementations where the intake flow path may be exposed to excessive transient pressures in the combustion chamber during activation or deactivation of an engine brake. Intake throttle, exhaust gas recirculation (EGR) valve, intake manifold blow-off valve, compressor bypass valve, exhaust throttle, turbocharger geometry or turbocharger waste gate may be controlled to effectuate counter flow management separately or in combination. Excessive transient conditions may also be prevented or managed by sequential valve motion in which brake motion activation occurs first and then exhaust valve main event deactivation occurs second. Delay between brake activation and main event deactivation may be facilitated using mechanical and/or hydraulic implements as well as electronically.
The present invention relates to a method for treating gastrointestinal bleeding in a subject with severe von Willebrand Disease comprising administering to the subject at least one dose of recombinant von Willebrand Factor (rVWF) ranging from about 40 IU/kg to about 100 IU/kg, wherein the first dose further comprises recombinant Factor VIII (rFVIII).
The invention relates to a clutch actuator (1) comprising a housing (2), an electric motor (8) fastened to the housing (2) and comprising a rotating shaft (17) of axis A, a movement conversion device (25, 53) of the roto-linear type, comprising an input member (25) movable in rotation about an axis B parallel to the axis A and an output member (53) movable in translation along the axis B, the input member (25) being driven in rotation by the shaft (17) of the electric motor (8) via a speed reducer (18, 19, 24), the speed reducer comprising a first toothed pinion (18) secured to the shaft (17) of the motor, a second toothed pinion (19) mounted freely about an axis (20) parallel to the axes A and B and meshing with the first pinion (18), and a third toothed pinion (24) secured to the input member (25) and meshing with the second pinion (19), characterized in that the second pinion (19) comprises a single toothing meshing both with the first pinion and the third pinion.
Title of the invention: FACILITY FOR LONGITUDINAL SEALING UP WIND BOXES IN TRAVELLING GRATE FACILITIES

Abstract:
A device for thermal treatment of bulk material, comprising a travelling grate chain being capable of revolving in the direction of movement consisting of an endless travelling grate (1) with movable links. Such a travelling grate chain features a plurality of pallet cars (3), each consisting of a frame (30) with end pieces (33), on which carrying wheels (31) are fixed, and grate rods (35) arranged on crossbars (32). Further, wind boxes (41, 43) are arranged such that from at least one wind box (41, 43) gas flows through the pallet cars (3) and their grate rods (35) from or into the wind boxes (41, 43). At each pallet car (3) of the travelling grate (1) at least one sealing blade (60) each is mounted in parallel to the moving direction and flush with the pallet car (3), whereby at least one sealing box (50) is foreseen in at least one section of the travelling grate (1) in parallel to the moving direction. A liquid medium can be filled into the at least one sealing box (50), wherein the sealing box (50) is arranged such that the sealing blade (60) is immersed in the liquid (L).
**Abstract:**

Systems and methods for managing excessive intake flow path pressure and counter flow are implemented to support enhanced engine braking applications, such as 2-stroke or 1.5-stroke engine braking implementations where the intake flow path may be exposed to excessive transient pressures in the combustion chamber during activation or deactivation of an engine brake. Intake throttle, exhaust gas recirculation (EGR) valve, intake manifold blow-off valve, compressor bypass valve, exhaust throttle, turbocharger geometry or turbocharger waste gate may be controlled to effectuate counter flow management separately or in combination. Excessive transient conditions may also be prevented or managed by sequential valve motion in which brake motion activation occurs first and then exhaust valve main event deactivation occurs second. Delay between brake activation and main event deactivation may be facilitated using mechanical and/or hydraulic implements as well as electronically.
Title of the invention: TREATMENT OF PATIENTS WITH SEVERE VON WILLEBRAND DISEASE UNDERGOING ELECTIVE SURGERY BY ADMINISTRATION OF RECOMBINANT VWF

Abstract:
The present invention relates to a method for pretreating a subject with severe von Willebrand disease prior to a surgical procedure comprising administering to the subject a dose ranging from about 20 IU/kg to about 60 IU/kg rVWF between about 12 hours and about 24 hours prior to the surgical procedure, and wherein Factor VIII is not administered with the rVWF prior to the surgical procedure.

No. of Pages: 128 No. of Claims: 21
The present invention relates to crystal forms of 2-[(2,4-dichlorophenyl)methyl]-4,4-dimethyl-isoxazolidin-3-one, a method for preparing these crystal forms, use thereof in agrochemical formulations and also particular compositions, mixtures or agrochemical formulations comprising these crystal forms.
The invention relates to a method for the precipitation of a solid material, where the method comprises: providing an aqueous metal ion solution, said metal ion solution comprising TiOSO$_4$ and metal ions of a metal M, where M is one or more of the elements: Mg, Co, Cu, Ni, Mn, Fe; providing an aqueous carbonate solution; and mixing said aqueous metal ion solution and said aqueous carbonate solution thereby providing a solid material comprising titanium and a metal carbonate comprising said metal(s) M, where the titanium is homogeneously distributed within the solid material. The invention also relates to a solid material, a method of preparing a positive electrode material for a secondary battery from the solid material and the use of the solid material as a precursor for the preparation of a positive electrode material for a secondary battery.

No. of Pages : 15 No. of Claims : 18
Title of the invention: DIE, ROLLER HEMMING PROCESSING SYSTEM, AND METHOD FOR PERFORMING ROLLER HEMMING PROCESS ON METAL WORKPIECE

This die (10) is provided with a plastic positioning body (11) which positions a set door outer panel (a metal workpiece) (90) at a predetermined orientation by making contact along an edge portion (91) of the door outer panel (90). The positioning body (11) has a metal insert (12) having a higher surface hardness than plastic in an action part upon which a force acts from an area in which the deformation resistance has locally increased in the door outer panel (90) when said area is bent. The metal insert (12) is considered to be in a semi-buried state in which some portions thereof are exposed on the surface of the action part while the other portions are buried in the action part.
According to some embodiments, a network node in a frequency division duplex (FDD) wireless communication network is operable to schedule a first downlink transmission with a first transmission processing time on a first frequency carrier. The scheduling comprises a first downlink assignment index (DAI). The first DAI comprises a first total DAI and a first accumulative DAI. The network node is operable to schedule a second downlink transmission with a second transmission processing time different than the first on a second frequency carrier. The scheduling comprises a second DAI. The second DAI comprises a second total DAI and a second accumulative DAI. The network node expects hybrid automatic repeat request (HARQ) feedback for the first downlink transmission and the second downlink transmission in a single uplink transmission. The network node is further to transmit the scheduling for the first and second downlink transmission to a wireless device.
A roller for a conveyor system comprises a nonlinear bore hole to facilitate retention of the roller on a roller-receiving portion of a corresponding shaft. A nonlinear bore hole comprises a central cylindrical portion for receiving a roller-receiving portion of the shaft and unaligned slots in communication with the central cylindrical portion to prevent migration of the roller from the roller-receiving portion.

FIG. 1

No. of Pages : 8 No. of Claims : 17
**Title of the invention:** FLUID DELIVERY SYSTEM AND METHOD

**International classification:** F04B 43/12, F04B 49/08

**Priority Document No:** 62/526679

**Priority Date:** 29/06/2017

**Name of priority country:** U.S.A.

**International Application No:** PCT/US2018/040345

**Filing Date:** 29/06/2018

**International Publication No:** WO/2019/006338

**Name of Applicant:**
1. MATTHEWS INTERNATIONAL CORPORATION
   - Address: Two North Shore Center Pittsburgh, Pennsylvania 15212 U.S.A.

**Name of Inventor:**
1. BUSKIRK, William A.
2. KIMERLING, Thomas E.
3. GILSON, Charles
4. YOUNG, Phillip J.
5. HALL, Kirk
6. MUELLER, Detlef

**Abstract:**
Disclosed herein is a fluid supply system that can provide fluid to a jetting assembly at a constant pressure or at pressures within a desired range of pressures. In an example, the fluid can be ink, and the jetting assembly can be a print head configured for dispensing the ink.

No. of Pages: 25  No. of Claims: 16
A method and a system for handling slender bodies is disclosed in a semi-finished production plant, comprising at least a cutting station (C) apt to separate slender bodies (1) from a continuous wire, a finishing station (E) of the head ends of said slender bodies (1), at least a dimensional verification station (F) downstream of said finishing station (E), and a transporting equipment for transporting said slender bodies (1) between each of said stations, wherein at or upstream of said cutting station (C) a marking unit is provided to apply a reference marking on said slender bodies (1), which working identifies an original attitude comprising at least an angular position of said slender bodies (1) with respect to a continuous wire from which they were separated, said transporting equipment comprises gripping and locking assembly (24) of said slender bodies (1), apt to lock at least the angular position of said reference mark with respect to a relative reference system of said transport equipment, and wherein upstream of said finishing station (E) it is provided a detecting and storing unit for data of at least said angular position with respect to said relative reference system, and means for determining said original attitude of said slender bodies on the basis of said data at least in said dimensional verification station (F) are also provided.
The disclosure is directed to improved methods for preparing substituted quinolinylcyclohexylpropanamide compounds.
**Title of the invention:** AMORPHOUS AND CRYSTALLINE FORMS OF IDO INHIBITORS

**International classification:** A61K 31/416, A61K 31/437, A61K 31/4375

**Priority Document No:** 62/527855

**Priority Date:** 30/06/2017

**Name of priority country:** U.S.A.

**International Application No:** PCT/US2018/040262

**Filing Date:** 29/06/2018

**International Publication No:** WO/2019/006283

**Name of Applicant:**
1. BRISTOL-MYERS SQUIBB COMPANY
   Address: Route 206 & Province Line Road, Princeton, NJ 08543 U.S.A.

**Name of Inventor:**
1. POWERS, Jay, Patrick
2. BECK, Hilary, Plake
3. OSIPOV, Maksim
4. REILLY, Maureen, Kay
5. SHUNATONA, Hunter, Paul
6. WALKER, James, Ross
7. ZIBINSKY, Mikhail
8. ROSENBAUM, Tamar
9. YOUNG, Ian, Scott
10. NELSON, Jennifer
11. VLAHOVA, Petinka

**Abstract:**
The present disclosure relates to amorphous and crystalline forms of (R)-N-(4-chlorophenyl)-2-((lS,4S)-4-(6-fluoroquinolin-4-yl)cyclohexyl)propanamide and its salts and hydrates, processes for their production, pharmaceutical compositions comprising them, and methods of treatment using them.

No. of Pages: 64  No. of Claims: 30
**Title of the invention:** BUILDING SIMULATOR AND BUILDING SIMULATION METHOD

| (51) International classification | :G06F 17/50, G06Q 10/04, G06Q 50/16 |
| (32) Priority Date | :08/08/2017 |
| (33) Name of priority country | :PCT |
| (86) International Application No | :PCT/JP2017/028722 |
| Filing Date | :08/08/2017 |
| (87) International Publication No | :WO/2019/030816 |
| (61) Patent of Addition to Application Number | :NA |
| Filing Date | :NA |
| (62) Divisional to Application Number | :NA |
| Filing Date | :NA |

(57) Abstract:
Provided are a building simulator and a building simulation method which are capable of suitably simulating buildings having different purposes, and with which it is possible to evaluate the degree of influence of an elevator facility on users and also evaluate trajectories of movement of users. A building simulator 1 is provided with a simulation unit 10 which evaluates at least the layout of a building to be configured, by assuming that there are changes in trajectories of movement of users that move around within the building, and on the basis of: elevator information that includes building specifications including at least the layout of the building, and that also includes at least specifications of an elevator facility to be set; and user information including at least attribute information about users that use various facilities located in the building.
The present invention generally relates to a ball gaming system such as a roulette wheel apparatus, and in particular to a ball launcher for use in a gaming system such as a roulette wheel apparatus and to a gaming system such as a roulette wheel apparatus comprising the ball launcher, wherein the ball launcher includes a ball shuttle for transporting a ball from at least one ball-receiving station to at least one launch tube. According to the present invention, said ball shuttle is configured to move to a reject-ball station in response to a reject-ball signal to transport any old and/or defective ball to said reject-ball station instead of said at least one launch tube.

No. of Pages : 32 No. of Claims : 21
Optical products are disclosed that include a polymeric substrate, provided with an infrared-reflective metal layer on an outer surface thereof that is subject to oxidation. The optical products are further provided with a protective coating, comprising one or more of a metal oxide or a metal nitride, deposited directly on the infrared-reflective metal layer using chemical vapor deposition. The optical products are further provided with a composite pigment coating, deposited on the protective coating, that include at least a first layer and a second layer, at least one of which layers comprises a first pigment, wherein each of the first layer and the second layer includes a binding group component, each of which binding group components together form a complementary binding group pair.
A heat machine (121) for realizing a heat cycle, the heat machine operating with a thermal fluid and comprising a drive unit (1) provided with a first rotor (4) and a second rotor (5), each having three pistons (7a, 7b, 7c; 9a, 9b, 9c) that are slidable in an annular chamber (12), wherein the pistons delimit six variable-volume chambers (13', 13, 13'; 14', 14, 14'). The drive unit comprises a transmission configured to convert the rotary motion with respective first and second periodically variable angular velocities (ω1, ω2) of said first and second rotor (4, 5), offset from each other, into a rotary motion at a constant angular velocity. The heat machine further comprises a compensation tank (44), configured to accumulate the compressed thermal fluid from the drive unit, a regenerator (42) configured to preheat the thermal fluid, a heater (41) configured to superheat the thermal fluid circulating in the serpentine coil, a burner (40), configured to supply the necessary thermal energy to the heater (41); wherein the regenerator (42), in fluid communication with the drive unit (1), is further configured to acquire energy-heat from the exhausted thermal fluid and use it to preheat the thermal fluid to be sent to the heater (41). The invention further relates to a method for realizing a heat cycle by means of said heat machine.
The Patent Office Journal No. 10/2020 Dated 06/03/2020

(12) PATENT APPLICATION PUBLICATION
(21) Application No.202017003808 A
(19) INDIA
(22) Date of filing of Application :28/01/2020
(43) Publication Date : 06/03/2020

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<th>(54) Title of the invention : PRELOADED EMERGENCY AIR SPRING ASSEMBLY</th>
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<td>Filing Date : 02/08/2018</td>
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<td>(61) Patent of Addition to Application Number : NA</td>
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<td>Filing Date : NA</td>
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<td>(62) Divisional to Application Number : NA</td>
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<td>Filing Date : NA</td>
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<tr>
<th>(71) Name of Applicant :</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) ZHUZHOU TIMES NEW MATERIAL TECHNOLOGY CO., LTD.</td>
</tr>
<tr>
<td>Address of Applicant : No.18, Haitian Road, Tianyuan District Zhuzhou, Hunan 412007 China</td>
</tr>
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<tr>
<th>(72) Name of Inventor :</th>
</tr>
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<tr>
<td>1) NONG, Duomin</td>
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<tr>
<td>2) YE, Te</td>
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<td>3) CHEN, Canhui</td>
</tr>
<tr>
<td>4) CHENG, Haitao</td>
</tr>
<tr>
<td>5) ZHOU, Jun</td>
</tr>
<tr>
<td>6) CHEN, Qiang</td>
</tr>
<tr>
<td>7) DUAN, Guoqi</td>
</tr>
<tr>
<td>8) CHEN, Qinghua</td>
</tr>
<tr>
<td>9) LONG, Yaokun</td>
</tr>
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(57) Abstract :
A preloaded emergency air spring assembly, comprising an upper cover plate (1), an airbag (2), an upper end plate (3), and a lower end plate (4). The periphery of the upper end plate (1) is connected to the periphery of the lower end plate (4) via the airbag (2). A steel spring (6) is provided between the upper cover plate (1) and the upper end plate (3). Multiple hourglass elastomers (5) are provided in the circumferential direction of the steel spring (6) between the upper cover plate (1) and the upper end plate (3). The air spring assembly have the advantages of being structurally simple and convenient to install, having low weight-supporting vertical stiffness, large vertical distension, and a high degree of comfort and stability, reducing creep, and allowing the implementation of soft stopping.

No. of Pages : 6 No. of Claims : 10
The invention relates to a method (S) for manufacturing an electronic board (1) comprising the following steps: - forming (S1, S4) a cavity (20) in the conductive skin layer (Ci) and in an underlying insulating layer (10), such that at least a portion of a solder pad (4) is exposed, - filling (S5) the cavity (20) with a solder paste (24), - positioning (S6) an SMD (3) opposite the cavity (20), - and soldering the SMD (3) on the electronic board (1).
The Patent Office Journal No. 10/2020 Dated 06/03/2020

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application : 28/01/2020
(21) Application No. 202017003814 A
(43) Publication Date : 06/03/2020

(54) Title of the invention : A COATED METALLIC SUBSTRATE

(51) International classification : C23C 28/02, C23C 14/02, C23C 14/14, C23C 14/22
(31) Priority Document No : PCT/IB2017/001045
(32) Priority Date : 30/08/2017
(33) Name of priority country : PCT
(36) Name of Applicant : 1) ARCELORMITTAL
(37) Address of Applicant : 24-26, Boulevard d'Avranches L-1160 Luxembourg Luxembourg
(71) Name of Applicant :
1) ARCELORMITTAL

(86) International Application No : PCT/IB2018/055407
Filing Date : 20/07/2018
(87) International Publication No : WO/2019/043472
(61) Patent of Addition to Application Number : NA
Filing Date : NA
(62) Divisional to Application Number : NA
Filing Date : NA

(57) Abstract :
The present invention relates to a coated metallic substrate comprising at least a first coating consisting of aluminum, such first coating having a thickness below 5µm and being directly topped by a second coating comprising from 0.5 to 5.9% by weight of magnesium, the balance being zinc.

No. of Pages : 13 No. of Claims : 19
The present invention relates to a coated metallic substrate comprising at least a first coating consisting of aluminum, such first coating having a thickness between 1.0 and 4.5µm and being directly topped by a second coating based on zinc, such second coating having a thickness between 1.5 and 9.0µm and wherein the thickness ratio of the first coating with respect to the second coating is between 0.2 and 1.2.
A method of detecting corrosion in a conduit or container comprises measuring the thickness of a wall of the conduit or container with one or more pulse-echo ultrasound devices, wherein the method comprises the following steps: (i) receiving signals indicative of A-scan data from the one or more pulse-echo ultrasound devices, wherein the A-scan data comprises a plurality of A-scan spectra; (ii) determining which of the A-scan spectra have a distorted waveform such that a reliable wall thickness measurement cannot be determined; (iii) analysing the A-scan spectra identified in step (ii) as having a distorted waveform to determine one or more A-scan spectral characteristics of each spectrum that are causing the distortion; (iv) resolving the waveform characteristics based on the determined spectral characteristics causing the waveform distortion so as to produce modified A-scan spectra; (v) determining thickness measurements of the wall based on the modified A-scan spectra; and (vi) determining the extent to which the wall has been corroded based on the thickness measurements determined in step (v) and additional thickness measurements determined from A-scan spectra.
**Title of the invention**: CD38 MODULATING ANTIBODY

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<th>(51) International classification</th>
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<td>(62) Divisional to Application Number</td>
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**Name of Applicant**:

1) BLACK BELT THERAPEUTICS LIMITED

Address of Applicant: Stevenage Bioscience Catalyst Accelerator Building Gunnels Wood Road Stevenage Hertfordshire SG1 2FX U.K.

**Name of Inventor**:

1) GOUBIER, Anne
2) SALIMU, Josephine
3) GOYENECHEA CORZO, Beatrix
4) MERCHIERS, Pascal
5) MOULDER, Kevin
6) EISSLER, Nina
7) FILOSTO, Simone
8) BARUAH, Hemanta
9) PRINZ, Bianka

**Abstract**:
The present disclosure provides antibody sequences found in antibodies that bind to human CD38. In particular, the present disclosure provides sequences of anti-human CD38 antibodies. Antibodies and antigen-binding portions thereof including such sequences present features compatible with pharmaceutical manufacturing and development can be provided as fully human antibodies (e.g., fully human monoclonal antibodies or antigen-binding fragments) that can be useful for medical methods and compositions, in particular for treating cancer.
(54) Title of the invention: ELECTROSURGICAL APPARATUS FOR DELIVERING RF AND/OR MICROWAVE ENERGY INTO BIOLOGICAL TISSUE

(57) Abstract:
An electrosurgical instrument for delivering electromagnetic energy to biological tissue, the instrument comprising an active tip having an electrically conductive protective hull mounted on an underside thereof. The hull has a smoothly contoured convex undersurface, and is formed as a shaped piece of electrically conductive bio-compatible material having a low coefficient of friction with biological tissue (e.g. stainless steel) which has the dual function of (i) physically protecting tissue that lies underneath the active tip, and (ii) providing an electrical connection between a coaxial feed line and the active tip.
A detection device for detecting the presence of a substance of interest in a sample is described. The device can include a data store comprising executable instructions for at least one convolutional neural network, CNN, configured to process images; and a processor coupled to the data store and configured to execute the instructions to operate the at least one CNN. The detection device can be configured to: obtain spectrometry data, operate a first one of the CNNs to process the spectrometry data to obtain a first CNN output; apply a mask to the spectrometry data to obtain masked data; operate a second one of the CNNs to process the masked data to obtain a second CNN output; and determine if the substance of interest is present in the sample based on both the first CNN output and the second CNN output.
The present invention relates to a method for obtaining a Bordetella pertussis-derived PRN protein, the method comprising a freezing and thawing process capable of effectively increasing an extracted level of PRN protein. In the present invention, it was found that when a pellet was frozen before treatment with urea and then slowly thawed at a cold temperature, an extracted level of PRN protein was effectively increased compared to experiment groups under other conditions. In addition, even when the method was applied to mass-scale production, a PRN extraction level was effectively increased. Therefore, a pre-treatment process for Bordetella pertussis comprising a freezing and thawing process can be effectively used for mass production of PRN for Bordetella pertussis vaccines.
An intraluminal support structure having a delivery configuration that is a crimped open configuration to increase flexibility while maneuvering in the anatomy and having a small scarring signature.
The present invention covers quinoline compounds of general formula (I), in which A, R1, R2, R3, R4, R5, R6, and Q are as defined herein, methods of preparing said compounds, intermediate compounds useful for preparing said compounds, pharmaceutical compositions and combinations comprising said compounds and the use of said compounds for manufacturing pharmaceutical compositions for the treatment, control and/or prevention of diseases, in particular of helminth infections, as a sole agent or in combination with other active ingredients.
The absorbent article manufacturing method according to the present invention pertains to improving a manufacturing startup process so as to accelerate the conveyance speed of each conveyance route (5M), (5S1), (5S2) up to a prescribed target speed from a manufacturing-halt state in which transportation on the respective conveyance routes is halted. According to the present invention, in a time period in which an absorbent article (1) including a component that had been located at the uppermost-stream position (5P) at the time of restoration of conveyance speed arrives at a defective article elimination part (58), the absorbent article (1) that arrived at the defective article elimination part (58) is determined to be a defective article (1Z) and is eliminated through the defective article elimination part (58).
(54) Title of the invention : ANTI-CD47 ANTIBODIES AND USES THEREOF

(56) Abstract :
Anti-CD47 antibodies and antigen-binding fragments thereof are described. Also described are nucleic acids encoding the antibodies, compositions comprising the antibodies, and methods of producing the antibodies and using the antibodies for treating or preventing diseases such as cancer, inflammatory disease, infectious disease, atherosclerosis, cardiovascular disease, metabolic disease, radiation-induced injury, and/or autoimmune disease.

No. of Pages : 67 No. of Claims : 30
The present invention pertains to a polymer emulsion capable of exhibiting scratch resistance even when a coating film is formed or when recording is performed on a recording medium having low liquid absorption, and a water-based ink for inkjet recording having exceptional ejection stability and bleed resistance during inkjet recording. [1] A polymer emulsion containing a polymer and water, wherein the polymer is a random copolymer or a block copolymer containing (a) structural units derived from one or more monomers selected from acrylic acid and methacrylic acid and (b) structural units derived from a hydrophobic vinyl monomer, the polymer moreover is a carboxy-group-containing polymer having an acid value of 150-300 mg KOH/g, and the polymer emulsion includes a compound that releases formaldehyde. [2] A water-based ink for inkjet recording, the water-based ink containing a pigment, the polymer, a water-soluble organic solvent, and water, wherein the water-soluble organic solvent includes one or more compounds selected from polyhydric alcohols and polyhydric alcohol alkyl ethers, the total amount of polyhydric alcohols and polyhydric alcohol alkyl ethers is 18% by mass or greater in the ink, and the water-based ink for inkjet recording includes a compound that releases formaldehyde.

No. of Pages : 66 No. of Claims : 16
Title of the invention: PRODUCTION MANAGEMENT SYSTEM AND PRODUCTION MANAGEMENT METHOD

Abstract:
This production management system comprises: a first component selection part (104) that, when combining a component from a component A group (first component group) and a component from a component B group (second component group) from among a plurality of component groups, prioritizes selection of a component Aa having a value distant from a tolerance median value of the component A group; and a second component selection part (105) that selects, from the component B group, a component Bb that, when combined with the component Aa selected from the component A group, yields a specific dimension that is within a target dimension range.

Name of Applicant:
1) DAIKIN INDUSTRIES, LTD.
Address of Applicant: Umeda Center Building, 4-12, Nakazaki-Nishi 2-Chome, Kita-ku, Osaka-shi, Osaka 5308323 Japan

Name of Inventor:
1) YOKOTA, Yoshihiko
2) OHTANI, Yousuke
3) KAYAMA, Norio
4) UCHIYAMA, Masaaki
5) KISHIMA, Hiroshi
6) SEKIDA, Naoto
7) OHI, Takashi
8) SANO, Masakazu

No. of Pages : 36
No. of Claims : 6
The invention relates mainly to a rotary electric machine for a motor vehicle, having: a casing (11), an electronic assembly (47) mounted on the casing, a protective cover (50) positioned around the electronic assembly (47), and a screw (55) that extends along an axis (X'') and allows the cover (50) to be fastened to the casing (11) and/or electronic assembly (47). The protective cover (50) has at least one opening that forms a fastening zone into which there extends at least one tongue (56) delimiting a central opening (57) for the screw (55) to pass through. The screw (55) has a screw head (70) and a retaining groove (71) such that the tongues (56) are housed in said groove (71).
**Title of the Invention:** REDUCING INTERFERENCE FROM DEVICES AT EXTRAORDINARY ALTITUDES

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<th>International Classification</th>
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**Abstract:**
The invention provides a method of reducing interference in a mobile communication system caused by a first user equipment, UE, device operating in a cell at a significantly higher altitude than other UE devices in the cell so as to cause interference, the method comprising detecting that the first UE device is operating at an altitude considered by the mobile communication system to be an extraordinary altitude; and reducing interference caused by the first UE device operating at the extraordinary altitude by controlling the operation of the first UE device.

**Name of Applicant:**
1) IPCOM GMBH & CO. KG
   Address of Applicant: Zugspitzstrasse 15 82049 Pullach, Germany

**Name of Inventor:**
1) SCHMIDT, Andreas
2) BIENAS, Maik
3) HANS, Martin

---

No. of Pages: 24
No. of Claims: 16
(54) Title of the invention: COMPOUNDS, COMPOSITIONALS, AND METHODS FOR TREATING T-CELL ACUTE LYMPHOBLASTIC LEUKEMIA

(57) Abstract:
In an aspect, the disclosure provides for compounds (II), compositions, and methods of administering the compounds and compositions to a patient in need thereof. In another aspect, the disclosure relates to compounds and compositions for treating cancer, for example, lymphoid leukemia. The disclosure further provides for compounds which inhibit two phosphoinositide 3-kinase (PI3K) isoforms, \( \gamma \) and \( \delta \), pharmaceutical compositions comprising said compounds, and methods of using said compounds and pharmaceutical compositions for treatment, amelioration, and/or prevention of non-Hodgkin lymphoma.

![Compounds Diagram](image-url)
(54) Title of the invention : PHARMACEUTICAL COMPOSITIONS, METHODS FOR PREPARATION USING LIPID VESICLE PARTICLES OF DEFINED SIZE, AND USES THEREOF


(31) Priority Document No : 62/530498
(32) Priority Date : 10/07/2017
(33) Name of priority country : U.S.A.

(86) International Application No : PCT/CA2017/051336
Filing Date : 09/11/2017

(87) International Publication No : WO/2019/010560

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

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

(71) Name of Applicant : 1) IMMUNOVACCINE TECHNOLOGIES INC.
Address of Applicant : 130 Eileen Stubbs Avenue Suite 19
Dartmouth, Nova Scotia B3B 2C4 Canada

(72) Name of Inventor :
1) SAMMATUR, Leeladhar
2) RAJAGOPALAN, Rajkanna
3) SHARMA, Arthvan
4) KALIAPERUMAL, Valarmathy
5) WEIR, Genevieve
6) STANFORD, Marianne
7) PENWELL, Andrea

(57) Abstract :
The present disclosure relates to methods for preparing a dried preparation comprising lipids and a therapeutic agent by using lipid vesicle particles having a mean particle size of ≤ 120 nm and a polydispersity index (PDI) of ≤ 0.1. The present application also provides stable, water-free pharmaceutical compositions comprising one or more lipid-based structures having a single layer lipid assembly, at least one therapeutic agent, and a hydrophobic carrier, as well as methods of treatment, uses and kits relating thereto, such as for example for inducing an antibody and/or CTL immune response.

No. of Pages : 152 No. of Claims : 98
Title of the invention: INTEGRATING REAL-TIME PERSONALIZED DOCUMENTS INTO A VIDEO CONFERENCE SESSION

Abstract:
Systems, methods, and computer readable media which perform an operation comprising establishing a video conference between a first application instance and a second application instance, and during the video conference: receiving, by an application server from the first application instance, an indication of a first data element required to prepare a tax return, storing, by a notification server, the indication of the first data element, and publishing, by a notification server, the indication of the first data element to the second application instance, wherein the second application instance is configured to output the indication of the data element for display.

No. of Pages: 15 No. of Claims: 14
A system includes a wearable device including sensors arranged at different locations on the wearable device. Each sensor measures electrical signals transmitted from a wrist or arm of a user. A position computation circuit is coupled to the sensors. The position computation circuit computes, using information derived from the electrical signals with a machine learning model, an output that describes a hand position of a hand of the wrist or arm of the user.

No. of Pages : 29 No. of Claims : 64
A system and method are provided for integrating a plurality of supply chain networks, the system comprising interfaces to vendors, consolidation centers, warehouses, retail facilities, and last mile delivery companies to enable multiple retailers to use at least one facility or transportation vehicle from another supply chain or delivery network to utilize excess capacities. The system provides a management service for exposing, abstracting, and integrating multiple supply chain network elements from different parties into a single supply chain and delivery network.
The invention relates to a slip ring sealing arrangement, comprising: a slip ring seal (10) having a rotating slip ring (2) and a stationary slip ring (3) which between them define a sealing gap (4); a slip ring carrier (5) which is arranged on the rotating slip ring (2); and at least one driver element (6) which is arranged between the rotating slip ring (2) and the slip ring carrier (5) and is designed to transmit torque from the slip ring carrier (5) to the rotating slip ring (2), wherein the rotating slip ring (2) is inserted in the slip ring carrier (5) with play, wherein the rotating slip ring (2) has a first cutout (20), wherein the slip ring carrier (5) has a second cutout (50), and wherein the driver element (6) is inserted in the first cutout (20) with play and in the second cutout (50) with play.
A method of controlling a plasma in a nuclear fusion reactor. The nuclear fusion reactor comprises sensors and plasma control inputs. An initial control model is provided, relating readings of at least a subset of the sensors to control of the plasma control inputs. A control loop is performed, comprising: operating the plasma control inputs in dependence upon the sensors according to the control model; determining correlations between readings of each of the sensors, and/or between readings of the sensors and states of the plasma control inputs; and adjusting the control model based on the determined correlations.
This production method for an amorphous alloy ribbon includes: a step in which an amorphous alloy ribbon (hereafter referred to as the alloy ribbon) having a composition comprising Fe, Si, B, C, and unavoidable impurities is prepared; a step in which the temperature of the alloy ribbon is increased to the highest attainable temperature in the range of 410-480°C with an average temperature increase rate of at least 50°C per second, but less than 800°C per second, while the alloy ribbon is in a state of being stretched to a tensile stress of 5-100 MPa; and a step in which the temperature of the alloy ribbon which has had the temperature thereof increased is reduced to a temperature-reducing heat transfer medium temperature from the highest attainable temperature with an average temperature reduction rate of at least 120°C per second but less than 600°C per second. The temperature increase in the step in which the temperature is increased and the temperature reduction in the step in which the temperature is reduced are performed by making the alloy ribbon travel in a stretched state, and bringing the traveling alloy ribbon into contact with the heat transfer medium. The production method produces an alloy ribbon having a composition represented by Fe100-a-bBaSibCc (where a and b represent atomic ratios in the composition, c represents the atomic ratio of C to 100.0 atom% of the total amount of Fe, Si, and B, 13.0 atom%≤a≤16.0 atom%, 2.5 atom%≤b≤5.0 atom%, 0.20 atom%≤c≤0.35 atom%, and 79.0 atom%≤100-a-b≤83.0 atom%).
A method of the present disclosure for manufacturing an amorphous alloy ribbon comprises: a step of preparing an amorphous alloy ribbon (hereafter referred to as an alloy ribbon) with a composition including Fe, Si, B, and unavoidable impurities; a step of, in a state in which the alloy ribbon is stretched under a tensile stress of 20 MPa to 80 MPa, increasing the temperature of the alloy ribbon to a highest temperature reached in a range of 410°C to 480°C at an average temperature-increase rate of not less than 50°C/sec and less than 800°C/sec; and a step of, in a state in which the alloy ribbon is stretched under a tensile stress of 20 MPa to 80 MPa, decreasing the temperature of the temperature-increased alloy ribbon from the highest temperature reached to a temperature-decrease heat transmission medium temperature, at an average temperature-decrease rate of not less than 120°C/sec and less than 600°C/sec. The amorphous alloy ribbon manufactured has a composition expressed by Fe100-a-bBaSibCc(a, b: atomic ratios in the composition, c: the atomic ratio of C with respect to a total amount of 100.0 atom% of Fe, Si, and B, wherein 13.0 atom% ≤ a ≤ 16.0 atom%, 2.5 atom% ≤ b ≤ 5.0 atom%, 0.20 atom% ≤ c ≤ 0.35 atom %, and 79.0 atom% ≤ 100-a-b ≤ 83.0 atom%).
Provided are a method and a device for encoding/decoding an image, performing an intra-prediction by using a plurality of reference sample lines. The image decoding method can comprise the steps of: configuring a plurality of reference sample lines; restoring an intra-prediction mode of a current block; and performing the intra-prediction for the current block on the basis of the plurality of reference sample lines and the intra-prediction mode.
(54) Title of the invention : POLYPHENOL PRODUCTION METHOD

(57) Abstract :
[PROBLEM] To provide a novel method for synthesising a polyphenol. [SOLUTION] A polyphenol production method including the reaction of catechin in the presence of a catalyst and an oxidising agent, said catalyst comprising a metal oxide and/or a composite that comprises: a substrate which has an inorganic material on the surface thereof; and metal nanoparticles of a particle diameter of 0.5100nm attached to the surface of the inorganic material.
A high-solids wastewater treatment system is disclosed. The wastewater treatment system includes a ballasted reactor, a solids-liquid separation subsystem, a pre-treatment subsystem, a ballast feed subsystem, and a ballast recovery subsystem. The high-solids wastewater treatment system can include a reaction tank, a thickener, and a filter press. A method of treating high-solids wastewater is also disclosed. The method includes contacting a wastewater feed with a coagulant or flocculant, thickening the dosed wastewater, treating the effluent with a ballast, settling the treated wastewater, and conveying the ballasted sludge to the wastewater feed, dosed wastewater, or treated wastewater. The wastewater feed may have more than 500 mg/L of total suspended solids. The wastewater feed may contain inorganic solids.
(54) Title of the invention: TREATMENT OF SALINE WATER FOR AGRICULTURAL AND POTABLE USE

(51) International classification: C02F 1/20, C02F 1/26, C02F 9/00
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Filing Date: NA

(71) Name of Applicant:
1) EVOQUA WATER TECHNOLOGIES LLC
Address of Applicant: 210 SIXTH AVENUE, SUITE 3300 PITTSBURGH, Pennsylvania 15222 U.S.A.

(72) Name of Inventor:
1) GANZI, Gary C.
2) WILKINS, Frederick C.

(57) Abstract:
Water treatment systems including electrically-driven and pressure-driven separation apparatus configured to produce a first treated water suitable for use as irrigation water and a second treated water suitable for use as potable water from one of brackish water and saline water and methods of operation of same.
Examples of the present disclosure relate to a container. The container has a chamber for storing build material for a three-dimensional printing system. The container comprises an opening co-axial with the chamber for coupling to the three-dimensional printing system. The container is configured such that rotation of the chamber in a first direction conveys build material in the chamber to the three-dimensional printing system and rotation of the chamber in a second direction conveys the build material away from the three-dimensional printing system.
The present invention relates to a ligand-SIFA-chelator conjugate, comprising, within a single molecule three separate moieties: (a) one or more ligands which are capable of binding to a disease-relevant target molecule, (b) a silicon-fluoride acceptor (SIFA) moiety which comprises a covalent bond between a silicon atom and a fluorine atom, and (c) one or more chelating groups, optionally containing a chelated nonradioactive or radioactive cation.
The invention relates to a flow meter comprising at least two spaced-apart measuring sensors, preferably ultrasonic sensors, wherein the measurement signals thereof are reflected by a deposit-resistant reflector.
Title of the invention: FLOCCULATION AND SEDIMENTATION DEVICE AND WATER PURIFICATION SYSTEM

Abstract:
This flocculation and sedimentation device 1 is a device for subjecting an inflowing liquid to be treated to flocculation and sedimentation processes and has a pressure vessel 2 and a sedimentation and separation unit 51 provided inside the pressure vessel and provided with an inclined plate 511.

No. of Pages : 21 No. of Claims : 6
Aspects of this disclosure relate to a biometric sensing device that combines sensing with an actuator for two way communication between a finger on a surface and the device. The sensor can also function as an actuator. A finger can be authenticated based on an image of the finger generated by the sensor and also based on a response to energy delivered to the finger by the actuator. Two way communication can provide more robust authentication than fingerprint sensing alone.
NOVEL SULFONAMIDE CARBOXAMIDE COMPOUNDS

The present invention relates to compounds of formula (I): Formula (I) wherein Q is selected from O or S; L is a saturated or unsaturated, optionally substituted C1-C12 hydrocarbylene group optionally including one or more heteroatoms N, O or S; R1 is -NR3R4, -OR5, -(C=NR6)R7, -(CO)R8, -CN, -N3, a quaternary ammonium group or an optionally substituted heterocycle; R3, R4, R5, R6, R7 and R8 are each independently hydrogen or a saturated or unsaturated, optionally substituted C1-C10 hydrocarbyl group optionally including one or more heteroatoms N, O or S; wherein optionally L and R3, or L and R4, or R3 and R4, or L and R5, or L and R6, or L and R7, or R6 and R7, or L and R8 together with the atom(s) to which they are attached may form a 3- to 12-membered, saturated or unsaturated, optionally substituted cyclic group; and R2 is a cyclic group substituted at the a-position, wherein R2 may optionally be further substituted; provided that the atom of L which is attached to the sulfur atom of the sulfonylurea group is a carbon atom and is not a ring atom of a heterocyclic or aromatic group. The present invention further relates to salts, solvates and prodrugs of such compounds, to pharmaceutical compositions comprising such compounds, and to the use of such compounds in the treatment and prevention of medical disorders and diseases, most especially by the inhibition of NLRP3.
**Title of the invention:** ULTRASONIC BIOMETRIC SENSING DEVICE INTEGRATED WITH OPTICS

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**Abstract:**
Aspects of this disclosure relate to a biometric sensing device that includes a sensing device and an integrated optical system for authentication. For instance, the sensing device can be an ultrasonic sensing device that can generate an image of a fingerprint and the optical system can transmit light to a finger through the ultrasonic scanning device. In some instances, the acoustic biometric sensing device can generate a liveness parameter associated with a finger based on a reflection of the light.

**Name of Applicant:**
1) THE BOARD OF TRUSTEES OF THE LEland STANFORD JUNIOR UNIVERSITY
   Address of Applicant: Office of the General Counsel, Building 170, Third Floor, Main Quad, P.O. Box 20386 Stanford, California 94305-2038 U.S.A.

2) ORCHID SOUND TECHNOLOGIES LLC

**Name of Inventor:**
1) KHURI-YAKUB, Butrus T.
2) RASMUSSEN, Morten Fischer
3) TOUMA, Gerard
4) IRWIN, III, John N.

No. of Pages: 100  No. of Claims: 20
The invention relates to a method for bending panes, comprising the following steps: providing a pane heated to a bending temperature; securing the pane to a contact surface of a first bending mould; pressing the pane between the first bending mould and a press frame, wherein the contact surface has an outer surface section that is suitable for a final bending of the edges in an edge region of the pane, wherein the press frame has a press surface that is complementary to the outer surface section of the first bending mould; transporting the pane on the press frame to a second bending mould, wherein a pre-bending of the surface occurs in an inner region of the pane surrounded by the edge region by means of gravity during transportation; pressing the pane between the second bending mould and the press frame, wherein the second bending mould has a contact surface with an outer surface section that is suitable for a final bending of the edges in the edge region of the pane, wherein the press surface of the press frame is complementary to the outer surface section of the second bending mould; securing the pane on the contact surface of the second bending mould, wherein a pre-bending of the surface occurs in the inner region of the pane; transporting the pane on a tempering frame to a cooling device for tempering the pane, wherein a final bending of the surface occurs in the inner region of the pane by means of gravity during transportation.
The invention relates to a method for bending panes, comprising the following steps: providing a pane heated to a bending temperature; securing the pane to a contact surface of the first bending mould; positioning a press frame for the pane in a first press frame position assigned to the first bending mould; transporting the pane on the press frame to a second press frame position assigned to the second bending mould; securing the pane on a contact surface of the second bending mould, wherein the press frame is attached to a carrier introduced into the bending zone by a delivery module, and wherein the press frame is laterally moved relative to the first and second bending mould by moving the carrier between the first press frame position and the second press frame position. The invention also relates to a device for bending panes, comprising a delivery module, preferably which can be moved relative to the bending zone, and which is delivered to the bending zone such that a carrier with a press frame for a pane can be introduced into the bending zone.
The present subject matter provides a crystalline form of the compound having the following structure: Formula (I), wherein the crystalline form is a polymorph, hydrate or solvate.
The invention relates to a pharmaceutical composition comprising vitamin B12 and iron for use in the treatment or prevention of vitamin and mineral deficiencies in patients which have been subjected to gastric sleeve surgery. The present invention further relates to said pharmaceutical composition as such.
The invention relates to an interface between a collet holder (300) and a tool adapter (500 - 504). The collet holder (300) comprises an inner cone (310), a flat surface (311), and an outer thread (230) for a tensioning nut (401), wherein the tool adapter (500 - 504) comprises an outer cone (320) which complements the inner cone (310), and the collet holder (300) has securing means, which are independent of the outer thread (230) and the tensioning nut (401), for the tool adapter (500 - 504). The securing means comprise one or more radially or diagonally arranged inner threads (315) and a tensioning pin (210) in each inner thread (315), and one or more recesses (317) which interact with the tensioning pin(s) (210) are provided in the tool adapter (500 - 504).
The purpose of the present invention is to provide a burner and a heating method, wherein, when an object to be heated is heated by a self-excited vibration flame, the discharged amount of NOx can be suppressed, and uniform heating can be performed at an excellent heat transfer efficiency even at a position far away from the burner. Provided is a burner 1 characterized by being provided with: a central fluid jetting port 2 having a fan-like cross-sectional shape in which the gap between a pair of side walls 63a, 63b gradually expands toward the downstream side; a pair of openings 62a, 62b which are provided in a side wall 61 of an upstream-side fluid jetting flow passage 6 of the central fluid jetting port 2 and communicate with each other via a communication pipe 7; a first peripheral fluid jetting port 3 disposed around the central fluid jetting port 2; a second peripheral fluid jetting port 4 disposed at a position where the distance between the center thereof and the center of the central fluid jetting port 2 is larger than the distance between the center of the first peripheral fluid jetting port 3 and the central fluid jetting port 2, and disposed in a direction perpendicular to the expansion direction of the central fluid jetting port 2; and a third peripheral fluid jetting port 5 disposed at a position where the distance between the center thereof and the center of the central fluid jetting port 2 is larger than the distance between the center of the second peripheral fluid jetting port 4 and the central fluid jetting port 2, and disposed in a direction perpendicular to the expansion direction of the central fluid jetting port 2.
The present invention features AIP peptide and polynucleotide compositions, methods of using such compositions for the treatment of CPVT, as well as a human induced pluripotent stem cell derived cardiomyocyte model, useful in characterizing agents that modulate myocardial conduction and contraction.
The invention relates to a knife blade for a cutting knife of an agricultural harvesting machine, comprising a blade top side and blade bottom side. A surface of the blade bottom side is composed of a flat surface arranged in a plane and a cut-out region extending above the plane. A height of the knife blade corresponds to a maximum distance between the blade top side and the flat surface in a direction normal to the plane. A material thickness of the knife blade corresponds to a distance between the blade top side and the blade bottom side. The invention further relates to a method for producing a knife blade.
The present invention describes pharmaceutical combinations, compositions, and methods comprising a statin and 6-propylamino-4,5,6,7-tetrahydro-1,3-benzothiazole-2-amine or a pharmaceutically acceptable salt and/or solvate thereof, that are useful for the treatment of synucleinopathic disorders.

No. of Pages : 47 No. of Claims : 17
Abstract:
A biological fluid collection device (10) that produces a stabilized biological sample with head-to-tail uniformity through the capturing of a high concentration front and subsequent redistribution of the high concentration front throughout a biological fluid is disclosed. The biological fluid collection device includes an inline mixer (16) used for head-to-tail mixing of a concentrated flow front. The mixing is achieved via a two-stage process. First, a front fraction of the flow is captured within a centered mixing chamber (30) via capillary assisted flow action. Second, the captured front volume is then slowly released throughout a small exit hole (36) and recombined with the rest of the flow volume that was diverted around the centered mixer chamber.
One embodiment relates to a handheld surgical instrument that comprises a rotary surgical end effector and a coupler configured to cause rotation of the same. The handheld surgical instrument further comprises a motor, which is configured to drive a motor output region. The handheld surgical instrument further comprises a transmission, which defines a transmission input region that interfaces with the motor output region and a transmission output region coupled to the transmission input region. The transmission output region is operably coupled to the coupler, and the transmission is configured to alter the speed of the coupler relative to the motor output region. The motor output region and the transmission input region interface one another at a motor-transmission interface, and the motor-transmission interface comprises a motor-transmission backlash such that drive of the motor output region within the motor-transmission backlash does not cause rotation of the rotary surgical end effector.
Title of the invention: ELECTRIC SWITCH PROVIDED WITH AN ARC-BLASTING UNIT

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Name of Inventor:
1) SIKORSKI, Thomas  
2) NECHAL, Boris  
3) LUESCHER, Robert

Abstract:
This electric switch comprises an arc-blasting unit with a compression cylinder (25) enclosing a compression chamber (27) mobile together with the mobile contacts (2), and a stationary piston (13) at an end of the compression chamber, provided with a support rod made up as a blowpipe (9) which channels the gas compressed in the chamber when the contacts separate to a nozzle (10) that directs the flow to a separation place (12) of the contacts so as to efficiently blast electric arcs. The arrangement is lightweight and occupies little space.

Diagram:
![Electric Switch Diagram](image)

No. of Pages: 7  No. of Claims: 8
An apparatus (100) for mixing a liquid (160) containing particulates (106, 108) comprising: a vessel (102) for containing the liquid (160) that includes a sidewall (120) and a bottom (124); and an impeller (300) rotating about a substantially vertical axis (X-X), said impeller (104): adapted for submerging below the liquid surface (162) by a distance that is approximately one-tenth to one-half of the height of the liquid (129); and include at least two annually spaced apart blades (310) extending radially outwardly from the impeller (300) comprised back-swept blades that are pitched substantially parallel to the vertical axis (X-X), at least 50% of the length of each blade (310) comprising an angled section (312) extending through a chord angle of 20 to 60 degrees; to produce (a) an inner, upward flow region (164) located along said vertical axis (X-X), (b) a transition flow region (166) located around the impeller (300) in which liquid moves radially outwardly toward the vessel sidewall (120), and (c) an outer, downward flow region (168) located along the sidewall (120).
Title of the invention: METHOD FOR PRODUCING SILICA CARRIER, AND SILICA CARRIER

Abstract:
To provide a silica carrier exhibiting high activity and selectivity when a catalytic component is supported thereon. The method for producing the silica carrier includes kneading fumed silica obtained by a combustion method, silica gel obtained by a gel method, and colloidal silica obtained by a sol-gel method or a water glass method, molding the resulting kneaded product, and calcining the resulting molded body. The silica carrier has, in the measurement of pore size distribution, mesopores with a pore size of 2 to 50 nm and macropores with a pore size of more than 50 nm and 1,000 nm or less.
According to certain embodiments, a method for use in a wireless device is disclosed. The method comprises determining whether to restrict transmission of a random access preamble during at least a portion of a synchronization signal (SS) burst set. The SS burst set comprises at least one SS block indicated as being transmitted. In certain embodiments, the method/wireless device/computer program code further comprises transmitting the random access preamble during a time that transmission of the random access preamble is not restricted.

1. Receiving an indication of actually transmitted SS blocks and/or blocks of SS blocks from the network.
2. Receiving an indicator whether to restrict transmission of a random access preamble when at least a portion of an SS block is indicated as actually being transmitted.
3. Determining whether to restrict transmission of a random access preamble when at least a portion of an SS block is indicated as actually being transmitted.
4. Transmitting the random access preamble during a time that transmission of the random access preamble is not restricted.
According to various embodiments, a validation device may be provided. The validation device may include: a source information identification circuit configured to determine information relating to a source file; a source information transmitter configured to transmit the information relating to the source file to a server; a validation program receiver configured to receive a validation program from the server; a validation circuit configured to execute the validation program to validate the source file; and a source transmitter configured to transmit the source file if the validation circuit validates the source file.

![Validation device diagram]

No. of Pages : 20 No. of Claims : 20
An oriented flow extraction method, apparatus, and extract are disclosed. The oriented flow extraction method can comprise loading extraction material into an extraction cell having a first portion and a second portion; introducing a first aliquot of extraction medium through the first portion of the extraction cell; expelling gas from the extraction cell through the second portion of the extraction cell; closing the second portion of the extraction cell, and increasing the pressure in the extraction cell as extraction medium flows into the first portion of the extraction cell; stopping the flow of extraction medium into the extraction cell, and introducing a second aliquot of extraction medium through the first portion of the extraction cell to push extract through second portion of the extraction cell. In some embodiments, the first portion is a bottom portion and the second portion is a top portion of the extraction cell.
Title of the invention: MOTOR WITH SEALING MEMBER

Abstract:
This motor (M) with a sealing member comprises: a case (1) housing a stator (S) and a rotor (R); a lid member (3) attached to the case (1) and having an insertion hole (3a) to which an output shaft (2) of the rotor (R) is inserted; an annular sealing member (4) that seals the outer circumference of the output shaft (2); and a detachable seal case (5) that holds the sealing member (4) and is provided on the opposite case (1) side to the lid member (3).

No. of Pages: 23  No. of Claims: 5
An optical data-recording system comprises a laser, a dynamic digital hologram, an electronic controller, and a scanning mechanism. The dynamic digital hologram includes a plurality of holographic zones, and is configured to direct the irradiance received thereon to an optical recording medium. The electronic controller is operatively coupled to the dynamic digital hologram and configured to control the irradiance directed from each of the holographic zones. The scanning mechanism is configured to change a relative positioning of the laser versus the dynamic digital hologram so that each of the holographic zones is irradiated in sequence by the laser.
Described herein are systems and methods that provide a natural language processing system (NLPS) that employs compressed word embeddings. An auto-encoder that includes encoder circuitry and decoder circuitry can be used to produce the compressed word embeddings. The decoder circuitry is trained to decompress the word embeddings with reduced or minimal differences between the original uncompressed word embeddings and the corresponding decompressed word embeddings. One or more parameters of the trained decoder circuitry are transferred to the NLPS, where the NLPS is then trained using the compressed word embeddings to improve the correctness of the responses or actions determined by the NLPS.
**Title of the invention:** ENHANCEMENT OF SOIL CHARACTERISTICS WITH LACTOBIONATE COMPOUNDS

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**Abstract:**
Methods of increasing soil water content are described. The methods may include applying a soil enhancement agent to the soil, where the soil enhancement agent includes one or both of (i) lactobionic acid and (ii) at least one salt of lactobionic acid. Treated soils with increased soil water content are also described. The treated soils may include a soil enhancement agent absorbed into the soil. The soil enhancement agent may include at least one salt of a lactobionic acid. Cations from the at least one salt of a lactobionic acid may aggregate at least a portion of the particles in the soil.

No. of Pages : 21 No. of Claims : 24
Extraction device for extracting a tuyere part, in particular a tuyere or a tuyere cooler, from a shaft furnace, the device comprising a supporting frame with positioning elements configured to position the device against a furnace wall. The device also comprises a carriage supported by the supporting frame. The carriage is movable in a direction radial to the furnace wall. The device further comprises an extraction rod having a first end attached to the carriage and a second end for connecting to the tuyere part, wherein the first end of the extraction rod comprises a stopper. The device also comprises a percussion system acting on the stopper of the extraction rod in a direction away from the furnace wall. The device comprises a pretensioning mechanism on the supporting frame. The pretensioning mechanism is configured to apply a load to the carriage, in a direction away from the furnace wall.
A simple metric, the mean absolute dose deviation (MADD), for characterizing dose-volume histograms (DVH) is disclosed. The MADD facilitates the use and the comparison of DVHs. The MADD is defined as the average of absolute differences between all points of a DVH and a dose point of a specified reference dose range. The MADD is a generalized metric free from distribution assumptions, and it is directly applicable to all types of structures.
Fluid product dispensing device, comprising a main body (10) with a mouthpiece (15), a product reservoir (20) containing a fluid product and a propellant gas, a metering valve (30) having a valve member (32) mounted on said reservoir (20) for selectively dispensing the fluid product, said valve member (32) being received in a valve member cavity (50) integral with the main body (10) and said reservoir (20) being slidably mounted in said main body (10), between a rest position, in which the metering valve (30) is closed, and a dispensing position in which the metering valve (30) is opened in order to dispense a dose of fluid product through said valve member (32) towards said mouthpiece (15). The device comprises: - at least one actuation sensor (100, 200, 300, 500) for detecting the actuation of the device and/or the dispensing of a dose of fluid product, - at least one orientation (400) and/or movement (500) sensor for detecting the orientation of the device and/or the movements of the device, - an electronic dose counter comprising a screen (1400) displaying the number of doses dispensed or that remain to be dispensed, and - means for transmitting signals (1500) to communicate, in particular remotely, information relating to the actuation of the device.
Title of the invention: EXHAUST MANIFOLD CONSTRUCTIONS INCLUDING THERMAL BARRIER COATINGS FOR OPPOSED-PISTON ENGINES

Abstract:
An exhaust manifold assembly with a thermal barrier coating for an opposed-piston engine reduces heat rejection to coolant, while increasing exhaust temperatures, fuel efficiency, and quicker exhaust after-treatment light-off. The exhaust manifold assembly can include a coating on the inside surface of the manifold assembly. The coated exhaust manifold assembly can ensure structural robustness of the exhaust manifold assembly over a larger range of operating temperatures.

![Figure 3](image)

No. of Pages : 12 No. of Claims : 13
The invention discloses a method for the preparation of substituted 4-(heptafluoro-2-propyl) anilines by reaction of 2-bromoheptafluoropropane with anilines in the presence of sodium dithionite, in a solvent and in the presence of a catalyst.
An exhaust plenum chamber with a thermal barrier coating for an opposed-piston engine reduces heat rejection to coolant, while increasing exhaust temperatures, fuel efficiency, and quicker exhaust after-treatment light-off. The exhaust plenum chamber can include a coating on the inside surface of the chamber. Posts which are structural and provide cooling channels or passageways can be present in the exhaust plenum chamber and coated with the thermal barrier coating material.
**Title of the invention:** MICRONEEDLE TATTOO PATCHES AND USE THEREOF

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**Abstract:**
Microneedle patches have been developed that can be used to deliver therapeutic, prophylactic, diagnostic agents and/or dyes to the skin. The microneedles encapsulate the agent(s) to be delivered. These are formed of a biodegradable polymer that dissolves upon insertion into skin or tissue, so that the microneedles break off from the substrate forming the patch, remaining in the skin/tissue at the site of insertion. The patches are used to create a tattoo or to deliver therapeutic, prophylactic or diagnostic agent in combination with a tattoo. In one embodiment, the microneedle patch contains both vaccine and dye pigments to administer vaccine and record such administration in one application of the microneedle patch.

No. of Pages: 35 No. of Claims: 20
Disclosed in the present application are a data transmission method, a terminal device, and a network device. The method comprises: the terminal device determines a first bandwidth portion and a second bandwidth portion; the terminal device uses the first bandwidth portion for data transmission and radio resource management (RRM) measurement on a specific time domain resource, and uses the second bandwidth portion for the data transmission on other time domain resources other than the specific time domain resource. Since the bandwidth portion used for data transmission and RRM measurement is different from the bandwidth portion only used for data transmission, the terminal device can efficiently perform data transmission in corresponding bandwidth portion, and meanwhile the requirements of RRM measurement are satisfied.
The present invention relates to a catalyst composition comprising: catalyst component A comprising a bridged metallocene compound with two tetrahydroindenyl groups, each group being unsubstituted or substituted; catalyst component B comprising a bridged metallocene compound with a substituted or unsubstituted cyclopentadienyl group and a substituted or unsubstituted fluorenyl group; an optional activator; an optional support; and an optional co-catalyst. The present invention also relates to a polymerization process using said composition. The invention further relates to olefin polymers at least partially catalyzed by said catalyst composition and articles comprising said olefin polymers.
Provided are: a liquid crystal composite that is suitable for light control and contains a liquid crystal composition that satisfies at least one of characteristics such as a high upper limit temperature, low lower limit temperature, low viscosity, large optical anisotropy, and large positive dielectric anisotropy or exhibits an adequate balance among at least two of these characteristics; and a liquid crystal light control element containing the liquid crystal composite. This liquid crystal composite contains a liquid crystal composition containing a polymer and a specific compound having large positive dielectric anisotropy. The liquid crystal composite may further contain a specific compound having a high upper limit temperature or low lower limit temperature, and a specific compound having large negative dielectric anisotropy.
Jaws of a surgical clip applier with housings formed thereon and methods for manufacturing are provided. In one exemplary embodiment, a surgical clip applier is provided having jaws on a distal end thereof with a rigid internal frame and an outer housing formed around the internal frame. The jaws of the surgical clip applier can include a variety of features to facilitate placement of surgical clips, including features to align a clip with the jaws and to prevent clip fallout during formation.

No. of Pages: 20
No. of Claims: 24
An electronic device for wireless communication with two groups of communication devices, the electronic device comprising a processing circuit, wherein the processing circuit is configured to: acquire a first waveform parameter related to a first group of communication devices, wherein the first waveform parameter is related to the form of a signal waveform for communications by the first group of communication devices; and notify a second group of communication devices of the first waveform parameter such that the second group of communication devices can determine, based on the first waveform parameter, a precoding matrix for communications by the second group of communication devices. Further disclosed are a wireless communication method, a base station, and a second wireless communication device from among one group of communication devices.
Title of the invention: FULLY DRY OPTICAL CABLE AND MANUFACTURING METHOD THEREFOR

Abstract:
Provided is a fully dry optical cable, which successively includes, from inside to outside: a light unit (1), a first layer of sheath (2), a braid layer (3) having multiple mesh holes, and a second layer of sheath (4), wherein the braid layer (3) is a reinforcing element, the optical cable has a first region where the first layer of sheath (2) and/or the second layer of sheath (4) extend, adjacent to a surface of the braid layer (3), to the mesh holes of the braid layer (3) and are embedded in the mesh holes, and at least part of the first region is a second region where the second layer of sheath (4) is embedded in the mesh holes and is connected to the first layer of sheath (2) as a whole, or, both the first layer of sheath (2) and the second layer of sheath (4) are embedded in the mesh holes and are connected as a whole. The reinforcing element of the optical cable is embedded between the two layers of sheath, and the two layers of sheath are connected as a whole, so that the reinforcing element does not slide relative to the sheaths, and the structure is more secure during traction in construction. A manufacturing method for an optical cable is further provided.
**Title of the invention:** LADAR TRANSMITTER WITH REIMAGER

- **International classification:** G01S 7/481, G01S 17/02, G02B 26/08, G02B 26/10
- **Priority Document No:** 15/644242
- **Priority Date:** 07/07/2017
- **Name of priority country:** U.S.A.
- **International Application No:** PCT/US2018/041102
- **Filing Date:** 06/07/2018
- **International Publication No:** WO/2019/010425
- **Priority Document No:** 15/644242
- **Priority Date:** 07/07/2017
- **Name of priority country:** U.S.A.
- **International Application No:** PCT/US2018/041102
- **Filing Date:** 06/07/2018
- **International Publication No:** WO/2019/010425
- **Name of Applicant:**
  1. AEYE, INC.
  Address of Applicant: 8 Executive Drive Suite 120 Fairview Heights, Illinois 62208 U.S.A.
- **Name of Inventor:**
  1. DUSSAN, Luis Carlos
  2. DEMMER, David R.
  3. STOCKTON, John
  4. STEINHARDT, Allan
  5. COOK, David
- **Abstract:**
  Disclosed herein is a compact beam scanner assembly that includes an ellipsoidal reimaging mirror.

*Figure 15*

No. of Pages: 33  No. of Claims: 41
**Title of the invention:** PESTICIDALLY ACTIVE PYRAZOLE DERIVATIVES

| (51) International classification | (71) Name of Applicant:  
| :A01N 43/56.C07D 403/04 | 1) SYNGENTA PARTICIPATIONS AG  
| | Address of Applicant: Rosentalstrasse 67 4058 Basel Switzerland |
| (31) Priority Document No | (31) Priority Date: 11/08/2017 |
| :17186046.3 | |
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| (86) International Application No | (87) International Publication No |
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| :NA | :NA |
| (72) Name of Inventor: |
| 1) GRIBKOV, Denis  
| 2) EL QACEMI, Myriem  
| 3) STOLLER, Andre  
| 4) JEANGUENAT, Andre  
| 5) BIGOT, Aurelien |

**Abstract:**
Compounds of formula (I), as defined herein, to processes for preparing them, to pesticidal, in particular insecticidal, acaricidal, molluscicidal and nematicidal compositions comprising them and to methods of using them to combat and control pests such as insect, acarine, mollusc and nematode pests.

No. of Pages: 67  No. of Claims: 12
A turbine housing defining a pair of volutes with respective outlets divided by a divider wall, includes a diffuser space in the gas flow path between the volutes and the turbine wheel. The diffuser space has an upstream portion having a smaller axial extent than a downstream portion of the diffuser space. The widening of the diffuser space tends to direct exhaust gas entering the diffusion space from at least one side of the divider wall towards the corresponding axial end of the diffuser space. Thus reduces the tendency of this gas to interrupt the flow into the diffuser space of exhaust gas from the other inlet volute.
The present invention relates to a method and a system for collecting volatile organic compounds and applying THz based detection of a signature of the collected compounds to determine egg properties. Egg properties include gender and/or fertility.
Recyclable, all-polyethylene laminate film structures suitable for use in a flexible packaging are disclosed. The structures comprise a film layer consisting essentially of an ethylene-based polymer and a barrier adhesive layer disposed on a surface of the film layer, wherein the structure has an oxygen transmission rate not greater than 100 O₂/m²/day, measured according to ASTM Method D3985. Recyclable, all-polyethylene laminate film structures suitable for use in a flexible packaging are disclosed comprising (A) a sealant film layer consisting essentially of an ethylene-based polymer, (B) an intermediate film layer consisting essentially of an ethylene-based polymer, (C) a structural film layer consisting essentially of an ethylene-based polymer, and (D) a barrier adhesive layer, wherein the recyclable, all-polyethylene laminate film structure has an oxygen transmission rate not greater than 100 O₂/m²/day, measured according to ASTM Method D3985. Articles comprising the disclosed laminate film structures, such as flexible packaging and stand-up pouches, are also disclosed.
Title of the invention: MOISTURE CURABLE COMPOSITION FOR WIRE AND CABLE INSULATION AND JACKET LAYERS

Abstract:
An insulation or jacket layer for a coated conductor is composed of (A) a crosslinked silane-functionalized polyolefin, (B) a filler, (C) a reactive branched polysiloxane, and (D) from 0.00 wt% to 20 wt% of a silanol condensation catalyst.

No. of Pages: 39 No. of Claims: 16
The invention relates to a coating composition comprising, in relation to 100% of the weight thereof: between 10 and 90 wt. % of at least one film-forming polymer selected from methyl cellulose, hydroxy propyl methyl cellulose, hydroxy propyl cellulose, hydroxy ethyl cellulose, sodium carboxy methyl cellulose, ethyl cellulose, PVA (polyvinyl alcohols), PVA-PEG (polyethylene glycol) copolymers, polyvinyl acetate, polyvinyl pyrrolidones (PVP), vinylpyrrolidone-vinyl acetate copolymers, alginates, pectin, arabic gum, guar gum, carrageenans, xanthan gum, inulin, chitosan, methacrylic acid copolymer, ethyl acetate, or polyethylene glycol - polypropylene glycol (PEG- PPG) copolymer; between 0 and 50 wt. % of at least one auxiliary coating agent selected from diluents, surfactants, plasticisers and anti-foaming agents; and between 10 and 50 wt. % of a whitening filler free of titanium dioxide comprising at least one alkaline or alkaline earth salt of a fatty acid and at least one cellulose compound selected from cellulose, cellulose powder, microcrystalline cellulose, or a mixture of said components.
Title of the invention: SEMICONDUCTOR LAYOUT IN FINFET TECHNOLOGIES

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<td>APPLE INC.</td>
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<td>Farzan FARBIZ, Thomas HOFFMANN, Xin Yi ZHANG</td>
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Priority Document No: 15/697239
Priority Date: 06/09/2017
Name of priority country: U.S.A.

International Application No: PCT/US2018/040588
Filing Date: 02/07/2018
International Publication No: WO/2019/050614

Abstract:
Systems, apparatuses, and methods for placing cells in an integrated circuit are described. In various embodiments, an integrated circuit is divided into many partitions. In a first set of partitions susceptible to transistor latch-up, the many transistor gate stripes are connected to one of the power rails rather than left floating. The lengths of the transistor gate stripes are shortened for well tap cells in the first partition, but increased in a second partition susceptible for poor signal integrity. One or more implant layers are formed underneath the transistor gate stripes in each of the first and second partitions to adjust an amount of protection against transistor latch-up and poor signal integrity. An electrostatic discharge transistor is included with at least one source region of multiple source regions formed in a well with a same doping polarity as the at least one source region.

No. of Pages: 21
No. of Claims: 20
A method of operating a battery comprises discharging a cathode comprising manganese dioxide to within a 2nd electron capacity of the manganese dioxide at a C-rate of equal to or slower than C/10, recharging the battery, and cycling the battery during use a plurality of times. The cathode is in a battery, and the battery comprises the cathode, an anode, a separator disposed between the anode and the cathode, and an electrolyte. The cathode comprises the manganese dioxide and a conductive carbon. The anode comprises: a metal component and a conductive carbon. The metal component can be a metal, metal oxide, or metal hydroxide, and the metal of the metal component can be zinc, lithium, aluminum, magnesium, iron, cadmium and a combination thereof.
Communication devices are provided that facilitate receiving information units and providing feedback to other communication devices.

No. of Pages : 67 No. of Claims : 9
**Title of the invention:** PULVERIZER AND OPERATING METHOD FOR PULVERIZER

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**Abstract:**
The purpose of the present invention is to spray a fire extinguishant to suppress fast burn when fast burn occurs in a housing at least in any operating state with differing pressure within the housing. A pulverizer (5) that pulverizes solid fuel to finely powdered solid fuel is provided with: a housing (41) constituting an outer shell for the pulverizer (5); pressure sensors (61A, 61B) for detecting pressure inside the housing (41); a first extinguishant spray unit (60A) for spraying extinguishant when the pressure detected by the pressure sensor (61A) is equal to or greater than a prescribed first threshold value in a normal operating state for the pulverizer (5); and a second extinguishant spray unit (60B) for spraying extinguishant when the pressure detected by the pressure sensor (61B) is equal to or greater than a second threshold value, which is a different threshold value from the first threshold value, in a stopped operating state for the pulverizer (5).

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The Patent Office Journal No. 10/2020 Dated 06/03/2020 12776
Bioactive priming polypeptides are provided that are useful when applied to plants in agricultural formulations. Methods of using the formulations containing the bioactive priming polypeptides are also provided which are applied exogenously to the surface of a plant or a plant cell membrane or endogenously to the interior of a plant or to a plant cell. The bioactive priming polypeptides when applied to a plant, a plant part, or a plant growth medium or a rhizosphere in an area surrounding the plant or the plant part increase growth, yield, health, longevity, productivity, and/or vigor of a plant or a plant part and/or decrease abiotic stress in the plant or the plant part and/or protect the plant or the plant part from disease, insects and/or nematodes, and/or increase the innate immune response of the plant or the plant part and/or change plant architecture.
An administration system for delivery of a pharmaceutical composition to a patient has a delivery device configured to deliver a dose of the pharmaceutical composition to the patient and a notification device in communication with the delivery device. The notification device is configured to communicate information about a status of at least one property of the delivery device. The delivery device is a wearable automatic injector configured to be worn on the patient's skin. A delivery device of the present disclosure allows a user or patient to view the status of a container. For example, a delivery device of the present disclosure provides a simple and effective visual means of displaying fill confirmation and delivery confirmation.
Title of the invention: METHOD FOR TRANSMITTING PERSONAL INFORMATION

Abstract:
The invention relates to methods for transmitting contact and other personal information. The technical result is an increase in operating speed. The method for transmitting personal information incorporates the receipt from a user, with the aid of said user's mobile device, fitted with a biometric data-reading sensor, or with the aid of specialised registration points equipped with computers with biometric data-reading sensors, of the user's contact information and the biometric data belonging to said user, the registration of the abovementioned user in a database located on a server with linking of the contact information to the biometric data, and, following a request containing the registered user's biometric data, initiated from a mobile device belonging to another user, the automatic delivery to this mobile device, by means of the server, of the contact and other personal information of the user to whom the biometric data belongs.

No. of Pages: 25 No. of Claims: 15
**Title of the invention:** METHOD AND APPARATUS FOR HANDLING RADIO LINK FAILURE IN SYSTEM USING MULTIPLE REFERENCE SIGNALS

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**Abstract:**
A communication method and a system for converging a 5th-generation (5G) communication system for supporting higher data rates beyond a 4th-generation (4G) system with a technology for internet of things (IoT) are provided. The present disclosure may be applied to intelligent services based on the 5G communication technology and the IoT-related technology, such as smart home, smart building, smart city, smart car, connected car, health care, digital education, smart retail, security and safety services. The method includes receiving a radio resource control (RRC) message including first information associated with a reference signal for a radio link monitoring (RLM) and second information associated with a threshold for the RLM, monitoring a radio link quality of at least one reference signal indicated by the first information, comparing the radio link quality of the at least one reference signal with the threshold and indicating an in-sync or an out-of-sync to a higher layer of the terminal based on the comparison result.
A method is disclosed for the oxidation and thermal decomposition of metal chlorides, leading to an efficient and effective separation of nuisance elements such as iron and aluminium from value metals such as copper and nickel. In the first instance, oxidation, especially for iron, is effected in an electrolytic reactor, wherein ferrous iron is oxidised to ferric. In a second embodiment, the oxidised solution is treated in a hydrothermal decomposer reactor, wherein decomposable trivalent metal chlorides form oxides and divalent metal chlorides form basic chlorides. The latter are soluble in dilute hydrochloric acid, and may be selectively re-dissolved from the hydrothermal solids, thereby effecting a clean separation. Hydrochloric acid is recovered from the hydrothermal reactor.
Title of the invention: ALUMINUM BASED NANOGALVANIC COMPOSITIONS USEFUL FOR GENERATING HYDROGEN GAS AND LOW TEMPERATURE PROCESSING THEREOF

Abstract:
Alloys comprised of a refined microstructure, ultrafine or nano scaled, that when reacted with water or any liquid containing water will spontaneously and rapidly produce hydrogen at ambient or elevated temperature are described. These metals, termed here as aluminum based nanogalvanic alloys will have applications that include but are not limited to energy generation on demand. The alloys may be composed of primarily aluminum and other metals e.g. tin bismuth, indium, gallium, lead, etc. and/or carbon, and mixtures and alloys thereof. The alloys may be processed by ball milling for the purpose of synthesizing powder feed stocks, in which each powder particle will have the above mentioned characteristics. These powders can be used in their inherent form or consolidated using commercially available techniques for the purpose of manufacturing useful functional components.
The present invention relates to novel heteroaryl amide derivatives of formula (I), as selective inhibitors of histone deacetylase 1 and 2 (HDAC1-2), to methods for the production of same, to pharmaceutical compositions comprising these compounds, and to the use of said compounds for the production of a medicament for the treatment of pathological conditions or diseases that can be improved by means of the inhibition of the activity of histone deacetylase class I, particularly HDAC1 and HDAC2, such as cancer, neurodegenerative diseases, infectious diseases, inflammatory diseases, heart failure and cardiac hypertrophy, diabetes, polycystic kidney disease, sickle cell disease and β-thalassemia disease, and to methods for the treatment of the diseases mentioned above.
Title of the invention: SYNTHESIS AND CHARACTERIZATION OF WELL DEFINED POLY(PROPYLENE FUMARATE) AND POLY(ETHYLENE GLYCOL) BLOCK COPOLYMERS

Abstract:
In one or more embodiments, the present invention provides a low molecular weight, non-toxic, resorbable poly(ethylene glycol)(PEG)-block-poly(propylene fumarate) (PPF) diblock copolymers and poly(propylene fumarate) (PPF)-block-poly(ethylene glycol)(PEG)-block-poly(propylene fumarate) (PPF) triblock copolymers (and related methods for their making and use) that permits hydration for the formation of such things as hydrogels and has constrained and predictable material properties suitable for 3D printing and drug delivery applications. Using continuous digital light processing (cDLP) hydrogels the diblock and triblock copolymers can be photochemically printed from an aqueous solution into structures having a 10-fold increase in elongation at break compared to traditional diethyl fumarate (DEF) based printing. Furthermore, PPF-PEG-PPF triblock hydrogels have also been found in vitro to be biocompatible across a number of engineered MC3T3, NIH3T3, and primary Schwann cells.
The invention relates to an optical article having a substrate made of an optical material comprising a polymer matrix and an improved abrasion and/or scratch resistance. The substrate comprises an external layer in which particles functionalized by a silane coupling agent are embedded into the polymer matrix, the Bayer value of said substrate determined in accordance with the ASTM F735-81 standard being at least 30% greater than the Bayer value of the same substrate with no embedded particles.
The invention relates to an optical article having a substrate made of an optical material comprising a polymer matrix and an improved light transmission in the visible range. The substrate comprises an external layer in which particles are embedded into the polymer matrix, the refractive index of the particles Rp being lower than the refractive index of the polymer matrix Rs.
Title of the invention: IN-WHEEL ELECTRIC MOTOR PROVIDED WITH A COOLING SYSTEM

**Abstract:**
An in-wheel electric motor includes at a vehicle side an elongated connector, a cylindrical stator body connected to the connector and on an outer surface of the stator body equipped with stator windings, a cylindrical rotor body enclosing the stator, and a power electronics device for powering the stator windings. The connector is provided with a first opening of a feed channel for coolant and a second opening of a return channel for coolant, each of the feed and return channels being parallel to an axial direction of the connector. The electric motor includes a cooling circuitry with a feed connector and a return connector for coolant, which circuitry includes a coolant supply channel that extends from the feed connector through first the power electronics device and subsequently through a cooling jacket that is situated at the perimeter of the cylindrical stator body and from there to the return connector.

**Fig. 3**

No. of Pages : 15 No. of Claims : 16
Title of the invention: POROUS MEMBRANE FOR MEMBRANE DISTILLATION, MEMBRANE MODULE, AND MEMBRANE DISTILLATION DEVICE

Abstract:
The purpose of the present invention is to provide a porous membrane for membrane distillation, which has an excellent heat insulating property. The porous membrane for membrane distillation according to the present invention comprises aerogel particles.

No. of Pages: 32 No. of Claims: 13
An in-wheel motor for a vehicle is disclosed, comprising: a stator with a connector member for attaching the stator to the vehicle, the connector member comprising a shaft, an end plate of a larger diameter than the shaft, and a passage for coolant through said end plate, the stator further comprising a hollow stator body having a cylindrical outer surface and mounted to the connector member, wherein a plurality of cooling channels adapted for circulation of a liquid coolant extends along the hollow stator body and are in fluid connection with said coolant supply duct, said plurality of cooling channels having an inlet for supply of liquid coolant to the plurality of channels and an outlet for discharging liquid coolant from the plurality of channels; wherein, at a side opposite from the connector member, the hollow stator body has an open end with a diameter larger than the diameter of the shaft. The invention further relates to a cooling jacket for such an in-wheel motor.
A depth camera assembly (DCA) for depth sensing of a local area includes a structured light generator, an imaging device, and a controller. The structured light generator illuminates the local area with a structured light pattern. The structured light generator includes a programmable diffractive optical element (PDOE) that generates diffracted scanning beams using optical beams. The PDOE functions as a dynamic diffraction grating that dynamically adjusts diffraction of the optical beams to generate the diffracted scanning beams of different patterns. The diffracted scanning beams are projected as the structured light pattern into the local area, wherein the structured light pattern is dynamically adjustable based on the PDOE. The imaging device captures image(s) of at least a portion of the structured light pattern reflected from object(s) in the local area. The controller determines depth information for the object(s) based on the captured image(s).
A joint assembly for joining rotor blade segments of a wind turbine rotor blade includes a female structural member secured within a first rotor blade segment. The female structural member includes first bore holes on opposing sides thereof that are aligned in a chord-wise direction. Further, the joint assembly includes a male structural member extending longitudinally from an end face of a second rotor blade segment. As such, the male structural member is received within the female structural member of the first rotor blade segment such that the first and second rotor blade segments are aligned and connected. The male structural member includes second bore holes on opposing sides thereof. Further, the second bore holes are aligned with the first bore holes. Moreover, the joint assembly includes at least one chord-wise extending pin extending through the first and second bore holes so as to join the first and second rotor blade segments. In addition, the male structural member has a height that increases from a blade root of the rotor blade towards the at least one chord-wise extending pin.
Disclosed in an embodiment of the present application are a wireless communication method and device, which may increase the communicative performance in synchronization signal block transmission. The method comprises: a network device indicating to a terminal device the resource positions and/or quantity of synchronization signal blocks sent to a terminal device; the network device sending to the terminal device the synchronization signal blocks of said resource positions and/or said quantity.
Abstract:
Filtration media, media packs, and filtration elements are described, including fluted filtration media having offset flutes arranged to intermittently contact flutes on adjacent media, including angled and curved flutes. Pleated filtration media with alternating sealed pleat edges are also disclosed, including fluted media with alternating sealed flutes. A media pack can have a first sheet of media and a second sheet of media. The first sheet of media can have a first plurality of flutes defining first flute valleys extending between a first face and a second face of the media pack. The second sheet of media can have a second plurality of flutes defining second flute peaks extending between the first face and the second face of the media pack. The first plurality of flutes can be non-parallel to the second plurality of flutes, and each first flute valley contacts one second flute peak at a discrete contact point.
A welding device is characterized by being provided with: a welding unit (20) comprising a pair of electrode wheels (21A, 21B) disposed facing each other across workpieces to be welded; a mash-down unit (30) comprising a pair of pressing rollers (31A, 31B) disposed facing each other across the workpieces and used for mashing down the welded portion of the workpieces welded by the electrode wheels (21A, 21B); a cooling unit (40) for providing a cooling medium to the welded portion mashed down by the pressing rollers; a heating unit (50) for heating the welded portion cooled by the cooling unit (40); and a moving body (10) which supports the welding unit (20), the reducing unit (30), the cooling unit (40), and the heating unit (50) and moves reciprocally in the direction in which the workpieces are welded.
(54) Title of the invention : ROCKING CHAIR

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<td>(61) Patent of Addition to Application Number</td>
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<td>(62) Divisional to Application Number</td>
<td>NA</td>
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(57) Abstract:
A rocking chair, comprising rear support frames (1) provided with a rotating portion (11) at the bottom thereof, a front swing frame (2) pivotally connected to the rear support frames (1) and also serving as a front support frame, and an electric swing driving mechanism (3) driving the front swing frame (2) to continuously rotate in a reciprocal manner relative to the rear support frames (1), wherein a moving portion (21) is disposed at the bottom of the front swing frame (2). As the front swing frame (2) continuously rotates in a reciprocal manner relative to the rear support frames (1), the distance between the moving portion (21) and the rotating portion (11) alternately increases and decreases, such that pivot points of opposing support surfaces of the rear support frames (1) and the front swing frame (2) alternately raise and lower. The structure of the rocking chair has automatic rocking, and raising and lowering functions, and does not require an additional fixing frame to fix the rocking chair to achieve stable movement over a large area. The weight of a seat body of the rocking chair directly acts upon the front swing frame (2) and the rear support frame (1), so that the electric swing drive mechanism (3) requires less power and such power requirements are easily fulfilled by a power source. Moreover, the moving portion (21) and the rotating portion (11) are provided with wheels, such that the rocking chair can also function as a baby carriage.

No. of Pages : 17  No. of Claims : 18
(12) PATENT APPLICATION PUBLICATION
(21) Application No.202017005421 A
(19) INDIA
(22) Date of filing of Application :07/02/2020
(43) Publication Date : 06/03/2020

(54) Title of the invention : BICYCLIC INHIBITORS OF HISTONE DEACETYLASE

(31) Priority Document No :62/541807
(32) Priority Date :07/08/2017
(33) Name of priority country :U.S.A.
(86) International Application No :PCT/US2018/045528
   Filing Date :07/08/2018
(87) International Publication No :WO/2019/032528
(61) Patent of Addition to Application Number :NA
   Filing Date :NA
(62) Divisional to Application Number :NA
   Filing Date :NA

(57) Abstract :
Provided herein are compounds and pharmaceutically acceptable salts thereof, and pharmaceutical compositions thereof, which are useful in the treatment of conditions associated with inhibition of HDAC (e.g., HDAC2).

No. of Pages : 40 No. of Claims : 6
The invention relates to a system (1) for applying a building material, comprising: a movement device (2) for modifying a site of application in a space; a first component (3) of the building material; a second component (4) of the building material; a mixer (5) for mixing the first component (3) and the second component (4), the mixer (5) comprising a drive module (10) with a first coupling element (14) and a mixing chamber module (11) with a second coupling element (15), the drive module (10) and the mixing chamber module (11) being detachably embodied, and the drive module (10) and the mixing chamber module (11) being actively interconnected in an application state of the system by means of the coupling elements (14, 15).
The present invention addresses the problem of providing a novel anti-CD147 antibody having exceptional anti-tumor activity and exceptional safety. The present invention also addresses the problem of providing a medicine containing such an antibody. The present invention also addresses the problem of providing, inter alia, a method for treating tumors in which the antibody or medicine is used. The present invention provides a CD147-specific antibody that activates CD147 and demonstrates a strong anti-tumor effect. The present invention provides an anti-CD147 antibody that demonstrates a strong anti-tumor effect independent of effector function. The present invention provides a pharmaceutical composition that contains such an anti-CD147 antibody. The present invention provides a method for treating tumors in which such an anti-CD147 antibody and/or pharmaceutical composition is used.
An implantable prosthetic valve that is radially collapsible to a collapsed configuration and radially expandable to an expanded configuration includes an annular frame having an inflow end, an outflow end, and a longitudinal axis. A leaflet structure is positioned within the frame and secured thereto, and a sealing element is secured to the frame. The sealing element includes a first woven portion extending circumferentially around the frame. The first woven portion includes a plurality of interwoven filaments. The sealing element further includes a second woven portion extending circumferentially around the frame and spaced apart from the first woven portion along the longitudinal axis of the frame. At least a portion of the filaments exit the weave of the first woven portion and form loops extending radially outwardly from the frame.
The invention describes a mounting device (5) for mould parts of an injection-moulding tool, which has a mounting plate that can be inserted into an injection-moulding machine and on which a mould carrier (15) for receiving first mould parts (10, 10) can be mounted. The mounting plate is arranged on top of a mounting frame (40), which has a guiding system (43, 44, 50) for a translational movement of the mounting plate along a longitudinal extent of the mounting frame (40). The mounting frame (40) also has a supporting device (45) for a second mould part (20), which can be arranged in a stationary manner and corresponds to at least one of the first mould parts (10, 10). The invention also relates to an injection-moulding tool and an injection-moulding machine.
This invention concerns pharmaceutical compositions for administration via intramuscular or subcutaneous injection, comprising micro- or nanoparticles of the anti-TB compound bedaquiline, suspended in an aqueous pharmaceutically acceptable carrier, and the use of such pharmaceutical compositions in the treatment and prophylaxis of a pathogenic mycobacterial infection.

No. of Pages : 53 No. of Claims : 14
An optical fiber includes (i) a chlorine doped silica based core having a core alpha (Coreα) ≥4, a radius r1, and a maximum refractive index δ1_max % and (ii) a cladding surrounding the core. The cladding surrounding the core includes a) a first inner cladding region adjacent to and in contact with the core and having a refractive index δ2, a radius r2, and a minimum refractive index δ2_min such that δ2_min < δ1_max, b) a second inner cladding adjacent to and in contact with the first inner cladding having a refractive index δ3, a radius r3, and a minimum refractive index δ3_min such that δ3_min < δ2, and c) an outer cladding region surrounding the second inner cladding region and having a refractive index δ5, a radius r_max, and a minimum refractive index δ3_min such that δ3_min < δ2.
A retaining pin comprising a body section having an aperture therein and being provided with a suction cap. An actuation mechanism arranged at a first end of the body section and a pin is connected at a first end to the actuation means and extends therefrom, through the aperture of the body section. An outer sleeve is arranged around the pin and in contact therewith and the outer sleeve comprises an expandable section that, upon operation of the actuation means, can be expanded from a first dimension to a second dimension.
Title of the invention: LAP FILLET ARC WELDING JOINT

Abstract:
This lap fillet arc welding joint is provided with: a first steel plate and a second steel plate which overlap each other and each of which has a tensile strength of at least 950 MPa; and a weld metal extending along a corner that is formed by the surface of the first steel plate and an end surface of the second steel plate, wherein when \( \beta \) is the toe angle of the weld metal, \( NA \) is the total number of recesses present on the surface of the weld metal within a range of 0.4 mm from a melting boundary, and among such recesses, \( NB \) is the number of recesses in contact with ferrite particles having a maximum particle diameter of at least 10 \( \mu \)m, the weld metal satisfies both of the following conditional equations (1) and (2): 

\[ 0^\circ < \beta \]
(54) Title of the invention : ENGAGEMENT APPARATUS

(51) International classification : F16B 13/08, A47K 13/26

(31) Priority Document No : 1711143.6

(32) Priority Date : 11/07/2017

(33) Name of priority country : U.K.

(86) International Application No : PCT/GB2018/051973

Filing Date : 11/07/2018

(87) International Publication No : WO/2019/012277

(61) Patent of Addition to Application Number : NA

Filing Date : NA

(62) Divisional to Application Number : NA

Filing Date : NA

(57) Abstract :
A retaining pin having a body section with an aperture therein and an actuation mechanism arranged at a first end of the body section. A pin is provided and connected at a first end to the actuation means and extending therefrom, through the aperture of the body section. An outer sleeve is arranged around the pin in contact therewith and the outer sleeve comprises an expandable section that, upon operation of the actuation means, can be expanded from a first dimension to a second dimension, wherein the second dimension is greater than the first.

No. of Pages : 20 No. of Claims : 13
Various embodiments of the present technology provide methods and systems for soil enrichment. The systems may comprise a bioreactor system coupled to an initial treatment system for the cultivation of a live microorganism culture containing organic nutrients on an agriculturally effective scale. The systems may be automated and/or portable for practical applications onto target fields. The live microorganism culture may be delivered onto the soil of the target fields, enriching the soil with the organic nutrients that become bioavailable to crops growing in the soil. The soil enrichment system may provide a sustainable approach to agriculture that may efficiently enhance the natural processes of the native soil of any crop.
The disclosure relates to pharmaceutical combinations comprising antibodies against BST1 (ADP-ribosyl cyclase 2) together with a cytidine analogue or a pharmaceutically-acceptable salt thereof, and methods for the treatment of diseases, such as cancers mediated by BST1 (ADP-ribosyl cyclase 2) expression/activity and/or associated with abnormal expression/activity of BST1.
To increase the activity of a solid acid catalyst used for the production of an aliphatic carboxylic acid ester and thereby achieve efficiency enhancement in the production of an aliphatic carboxylic acid ester. In a method for producing an aliphatic carboxylic acid ester by reacting an aliphatic carboxylic acid having from 1 to 5 carbon atoms and an olefin having from 2 to 4 carbon atoms in a gas phase by use of a solid acid catalyst, a solid acid catalyst in which a heteropolyacid or a salt thereof is supported on a silica carrier obtainable by kneading fumed silica obtained by a combustion method, silica gel obtained by a gel method, and colloidal silica obtained by a sol-gel method or a water glass method, molding the resulting kneaded product, and calcining the resulting molded body, is used.
The present invention addresses the problem of providing a pharmaceutical tablet which has high tensile strength and excellent rapid disintegrability. A pharmaceutical tablet according to the present invention contains a medicinal ingredient, a polyvinyl alcohol resin and a plasticizer other than water, and is obtained by a direct tableting method. This pharmaceutical tablet is configured such that the content of the plasticizer is 1-8 parts by weight relative to 100 parts by weight of the polyvinyl alcohol resin.
A light-emitting jewelry piece includes a gemstone, a head, and a mounting. The head is configured to interconnect the gemstone to the mounting. The mounting is arranged to secure the light-emitting jewelry piece to a person or a personal adornment.
A method is disclosed for the oxidation and thermal decomposition of metal chlorides, leading to an efficient and effective separation of nuisance elements such as iron and aluminium from value metals such as copper and nickel. In the first instance, oxidation, especially for iron, is effected in an electrolytic reactor, wherein ferrous iron is oxidised to ferric. In a second embodiment, the oxidised solution is treated in a hydrothermal decomposer reactor, wherein decomposable trivalent metal chlorides form oxides and divalent metal chlorides form basic chlorides. The latter are soluble in dilute hydrochloric acid, and may be selectively re-dissolved from the hydrothermal solids, thereby effecting a clean separation. Hydrochloric acid is recovered from the hydrothermal reactor.

Figure 1
The present invention relates to nanostructured conjugates, more specifically to nanostructured fusion proteins suitable for the selective delivery of their conjugated therapeutic agents to specific cell and tissue types. It also relates to nanoparticles comprising such nanostructured proteins and the therapeutic uses thereof.
The present invention provides for the dasatinib-thymine co-crystal and dasatinib-adenine co-crystal. The present invention further provides dasatinib-butanediol solvate. The present invention further provides for crystalline dasatinib-(±) 1, 2-Butane diol, crystalline dasatinib (R)-1, 2-Butanediol, crystalline dasatinib (S)-1, 2-Butanediol and crystalline dasatinib (±)-2, 3-Butanediol and processes for preparation thereof. The present invention also provides for a process for preparation of amorphous dasatinib using dasatinib-butanediol solvate. The present invention further provides for the preparation of anhydrous dasatinib. The present invention also provides for a process for preparation of dasatinib monohydrate from anhydrous dasatinib.
Apparatus, methods and uses for separating gas mixtures of at least two different gases under magnetic field and employing a membrane are described.

No. of Pages : 16 No. of Claims : 15
A yarn twisting machine comprising a main shaft into which yarn or yarns are introduced and from which yarn or yarns are taken out and the main shaft being driven by a first motor; a lower twisting disc being in contact with yarn and yarns taken out of the main shaft and said lower twisting disc being in communication with said main shaft; an upper twisting disc having an aperture through which the yarn or yarns creating a yarn balloon by advancing along the lower twisting disc are fed; an upper platform situated below said upper twisting disc; a winding element for winding the yarns or yarns passing through the upper twisting disc on a bobbin; a lower stationary table situated above the lower twisting disc; and a second motor for transmitting drive to the winding element through an axial magnetic coupling. The yarn twisting machine comprises a first power transfer device for rotating the upper twisting disc around the shaft axis, the first power transfer device being in communication with the first motor or the second motor and with the upper twisting disc.
A rotary compressor that may include an upper or outboard bearing above the motor components and, in this case, includes an upper bearing plate having a structure that ensures bearing alignment when press fit with an upper cap and a center shell. In some implementations, a main bearing frame that secures and holds a main bearing has a structure that when press fit with a lower cap and center shell ensure bearing alignment. Some implementations include disposing a hermetic terminal and a discharge port a the side of the upper cap or center shell.
A power conversion device according to an embodiment comprises a semiconductor element, an air receiver, an air guide, an airflow straightener, and a flange. Assuming that the assumed travel direction of a vehicle is a first direction, the direction of gravity is a second direction, and the direction perpendicular to the first direction and the second direction is a third direction, the air guide is disposed so as to face the air receiver in the third direction, and, among both ends thereof in the first direction, the end closer to the center of the air receiver is defined as a first end and the end on the opposite side from the first end is defined as a second end. The airflow straightener extends toward the opposite side from the second end along the first direction from the first end of the air guide. The flange extends toward the opposite side from the air receiver side from the second end of the air guide.
The present invention provides compounds of Formula (I): or stereoisomers, tautomers, or pharmaceutically-acceptable salts thereof, wherein all the variables are as defined herein. These compounds are selective ROCK inhibitors. This invention also relates to pharmaceutical compositions comprising these compounds and methods of treating cardiovascular, smooth muscle, oncologic, neuropathologic, autoimmune, fibrotic, and/or inflammatory disorders using the same.
**Title of the invention:** METHOD AND APPARATUS FOR UPLINK TRANSMISSION IN WIRELESS COMMUNICATION SYSTEM

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<td>The fifth generation (5G) or pre-5G communication system for supporting a higher data rate after a fourth generation (4G) communication system like a long term evolution (LTE) is provided. An uplink transmission method is provided, which can increase an uplink coverage through improvement of reception reliability of uplink control information and data information. A method by a terminal for performing a random access in a wireless communication system, the method comprises: receiving information for performing the random access from a base station; determining a frequency band to perform the random access between first and second frequency bands based on the information for performing the random access; and transmitting a random access preamble on the determined frequency band.</td>
<td>SAMSUNG ELECTRONICS CO., LTD.</td>
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Address of Applicant: 129, Samsung-ro, Yeongtong-gu Suwon-si, Gyeonggi-do 16677 Republic of Korea

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<tr>
<td>1) RYU, Hyunseok</td>
<td>2) KIM, Yongseok</td>
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<td>3) XUE, Peng</td>
<td>4) YU, Hyunkyu</td>
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<tr>
<td>5) CHOI, Sangwon</td>
<td>6) WHANG, Kuyeon</td>
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No. of Pages: 30 No. of Claims: 15
A nozzle, according to the present invention, comprises: a body unit having a passage through which molten steel can pass, and having, on a lower end thereof, a discharge port from which the molten steel is discharged to the outside; and a flow control unit mounted in the body unit so as to be extensively formed in an outer width direction of the body unit around the body unit. Thus, the nozzle, according to one aspect of the present invention, can more reduce a molten steel surface velocity around the nozzle than a conventional nozzle. Therefore, when molten steel is supplied by applying the nozzle having the flow control unit in accordance with one embodiment, nude steel is more reduced in the molten steel surface around the nozzle when compared with the prior art, such that mixing of slag with molten steel due to the nude steel can be more suppressed or prevented than before, thereby being capable of suppressing or preventing generation of an inclusion.
(54) Title of the invention : FACILITATING TRANSPORTATION SERVICES BY GENERATING A DIRECTIONAL INDICATOR BETWEEN A REQUESTER AND A TRANSPORTATION VEHICLE

(51) International classification :G08G 1/00,G01C 21/36,G06Q 50/03,H04W 4/02

(31) Priority Document No :15/670527
(32) Priority Date :07/08/2017
(33) Name of priority country :U.S.A.
(86) International Application No Filing Date :PCT/US2018/041456 10/07/2018
(87) International Publication No Filing Date :WO/2019/032229
(61) Patent of Addition to Application Number Filing Date :NA
(62) Divisional to Application Number Filing Date :NA

(57) Abstract :
The present disclosure is directed toward systems and methods for providing an indicator of a direction between a requester and a transportation vehicle. For example, the systems and methods described herein can provide a dynamic digital compass from the current orientation of a requester client device to the location of a transportation vehicle. For example, the systems and methods described herein can determine a location of a requester client device, a location of a transportation vehicle, and an orientation of the requester client device. The systems and methods can also utilize the location of the requester client device, the location of the transportation vehicle, and the orientation of the requester client device to identify a direction from the requester client device to the transportation vehicle relative to the current orientation of the requester client device and provide a digital compass to indicate the direction to the transportation vehicle.

(71)Name of Applicant :
1)LYFT, INC.
Address of Applicant :185 Berry Street Suite 5000 San Francisco, CA 94107 U.S.A.

(72)Name of Inventor :
1)MCDAVITT-VAN FLEET, Nathan

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No. of Pages : 51 No. of Claims : 20
Provided is a method and system for analyzing data in a run model at an edge device in a network environment. The method includes acquiring, at the edge device, data from the cloud environment, running a predetermined run model associated with the edge device and performing a first determination process by determining whether data analysis result from the run model performed is greater than an acceptance threshold. When it is determined that the data analysis result is less than the acceptance threshold, the method further performs a second determination process by determining whether the data analysis result is greater than a consideration threshold. If greater than the consideration threshold, the data is stored as acquired data to be further considered, and transferred to a cloud server.
The Patent Office Journal No. 10/2020 Dated 06/03/2020

Title of the invention: RESOURCE RECOVERY/RECYCLING FACILITY USING SUPERHEATED STEAM

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<td>PCT/JP2018/023474</td>
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Abstract:
One of Japan's current environmental problems is the fact that approximately 70% of the world's incinerators for waste disposal are Japanese incinerators. Although problems such as PPM are now being addressed, discharge at the particulate level into the atmosphere still occurs. In addition, harmful substances including residual chlorine remain in residual ash, and there is a limit to the disposal of waste soil by burying. Furthermore, the costs for maintaining the energy required for incineration are enormous. The present invention is capable of solving all of the aforementioned problems, as well as reducing said maintenance costs, and effectively using unwanted substances currently considered waste by recovering, recycling, and regenerating the same.

No. of Pages: 7 No. of Claims: 4
Title of the invention: FURNITURE ITEM WITH SLIDING FOLDABLE-AWAY LEAVES

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<td>International Application No</td>
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<td>WO/2019/012435</td>
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Abstract:
A furniture item (MC) is described comprising a body defining a compartment (20) with a front opening, a leaf (32) which is slidable and oscillating to close the front opening, and an L-shaped guide (50) comprising two linear segments (52, 54) connected together. The leaf can be moved by a command member (60) translatable parallelly to - and along - said outer side.

No. of Pages: 14 No. of Claims: 11
A method is described for preventing the derailment of a wheel (30) which can roll on a track (22) and is pivoted on a carriage which supports translatably a leaf (20) of a piece of furniture, comprising the steps of (i) inseparably mounting on the track (22) a slider (50) which can translate on the track (22) independently of the carriage, and (ii) constraining the slider (50) to at least one of the wheel (30), the carriage or the leaf (20) to keep the wheel (30) in condition of rolling on the track (22) without derailing. A simple and effective way is achieved to anchor the wheel to the track.
A thermal trigger assembly for remote mechanical actuation of another fire protection system component includes an activation component having a base and a movable member. A bias member biases the movable member from a preactivation to an activated position with respect to the base. A thermally responsive element retains the movable member in the preactivation position until a predetermined thermodynamic condition is reached, when the thermally responsive element loses structural integrity. A flexible connector includes a flexible hollow outer cable housing with one end configured to be stationarily (preferably fixedly) connected with the base. A flexible cable is inside the outer cable housing for sliding movement therein and has one end configured to be stationarily (preferably fixedly) connected with the movable member. The flexible cable is moved with respect to the outer cable housing by movement of the movable member upon loss of structural integrity by the thermally responsive element.
Title of the invention: METHOD OF SPATIALLY LOCATING POINTS OF INTEREST DURING A SURGICAL PROCEDURE

Abstract:
A method of visualizing a surgical site includes scanning a surgical site with an ultrasound system, marking a first area or point of interest within a cross-sectional view of the surgical site with a first tag, viewing the surgical site with a camera, and showing an image of the surgical site captured by the camera on a second display. The second display displays a first indicia representative of the first tag on the image of the surgical site captured by the camera.
An outlet coupling for a sealant container comprises a connector having an open first end to engage with a tire valve stem and an open second end continuous with a channel. The outlet coupling also comprises a pin at least partially located within the channel, the pin comprising a body having a head and an engaging portion at substantially opposite ends thereof. The head is in contact with a biasing member and the engaging portion is engaged with a sealing element. The pin is movable between an open position wherein the sealing element is spaced from an end of the channel and a closed position wherein the sealing element seals the end of the channel. Methods of sealing a puncture in an inflatable article, such as a pneumatic tire, with a tire repair apparatus using the outlet coupling are also disclosed.
Provided is a display device having a display area in which junctures are difficult to distinguish. The display device has a first display panel and a second display panel. The first display panel has a first display area and an area which transmits visible light. The second display panel has a second display area. The first display area is adjacent to the area which transmits visible light. The first display area has a first light emitting element and a second light emitting element. A first common electrode of the first light emitting element has a section which adjoins a second common electrode of the second light emitting element. The first common electrode has a visible light reflecting function. The second common electrode has a visible light transmitting function. The second light emitting element is positioned closer to the area which transmits visible light than the first light emitting element. The second display area has a section that overlaps with the second light emitting element and a section that overlaps with the area which transmits visible light.
A WTRU may initiate access for a PDU session over multiple access networks. The WTRU may register with two or more access networks. For example, the WTRU may register with a 3GPP access network (e.g., LTE Advanced) and a non-3GPP access network (e.g., Wi-Fi). The WTRU may determine to request a multi-access PDU session for a (e.g., at least one) PDU session. A multi-access PDU session may correspond to a PDU session where the WTRU communicates one or more PDUs associated with the PDU session over the 3GPP access network and one or more PDUs associated with the PDU session over the non-3GPP access network. The WTRU may receive a confirmation message indicating that a multi-access PDU session has been established. The WTRU may send uplink data over the 3GPP access network and the non-3GPP access network, e.g., in accordance with the established multi-access PDU session.
Title of the invention: HEAT EXCHANGER COMPRISING A MULTI-CHANNEL DISTRIBUTION ELEMENT

Priority Document No: 1757539
Priority Date: 04/08/2017
Name of priority country: France
International Application No Filing Date: PCT/FR2018/051804 16/07/2018
International Publication No: WO/2019/025691
Patent of Addition to Application Number Filing Date: NA NA
Divisional to Application Number Filing Date: NA NA

Name of Applicant:
1. L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES GEORGES CLAUDE
   Address of Applicant: 75, Quai d'Orsay 75007 PARIS France

Name of Inventor:
1. CRAYSSAC, Frederic
2. CADALEN, Sebastien
3. WAGNER, Marc
4. SANIEZ, Quentin

Abstract:
The invention concerns a heat exchanger comprising a distribution element (22) configured to be arranged in at least one distribution area (20) of a plate-fin heat exchanger (1), said distribution element (22) comprising a plurality of separating walls (25) arranged such that, when the distribution element is arranged in a distribution area (20), said distribution area (20) is divided into a plurality of channels (26) for the flow of the fluid (F1). According to the invention, said channels (26) define flow paths of different lengths and having fluid passage cross-sections that vary along said flow paths.
**Title of the invention:** SPIROCYCLE COMPOUNDS AND METHODS OF MAKING AND USING SAME

**Abstract:**
Provided herein are compounds and compositions useful as modulators of MAGL. Furthermore, the subject compounds and compositions are useful for the treatment of pain.

No. of Pages : 263  No. of Claims : 101
**Title of the invention:** SPIROCYCLE COMPOUNDS AND METHODS OF MAKING AND USING SAME

**International classification:** A61K 31/27, A61K 31/435, A61K 31/438, C07D 295/205, C07D 403/04

**Priority Document No:** 62/551721

**Priority Date:** 29/08/2017

**Name of priority country:** U.S.A.

**International Application No:** PCT/US2018/048372

**Filing Date:** 28/08/2018

**International Publication No:** WO/2019/046318

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<th>Address of Applicant</th>
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<tbody>
<tr>
<td>1) LUNDBECK LA JOLLA RESEARCH CENTER, INC.</td>
<td>10835 Road to the Cure, Suite 250 San Diego, California 92121 U.S.A.</td>
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<tr>
<td>1) GRICE, Cheryl A.</td>
<td>2) WEBER, Olivia D.</td>
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<tr>
<td>3) BUZARD, Daniel J.</td>
<td>4) SHAGHAIF, Michael B.</td>
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<td>5) JONES, Todd K.</td>
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</table>

**Abstract:**
Provided herein are compounds and compositions useful as modulators of MAGL. Furthermore, the subject compounds and compositions are useful for the treatment of pain.

No. of Pages: 250 No. of Claims: 72
Disclosed is a system for executing a computer process for processing a transaction. The system comprises a point-of-sale (POS) terminal, and an application support terminal (AST). The POS terminal comprises a POS processor and a POS memory device in communication with the POS processor and storing POS program instructions thereon. The POS processor is operative with the POS program instructions to receive transaction information comprising payment vehicle credentials of a payment vehicle for use in processing the transaction, and transaction details defining the transaction. The POS processor is further operative to determine, based on the transaction information, that the POS terminal cannot process the transaction, send the transaction information to the AST, the AST comprising an AST processor, and an AST memory device in communication with the AST processor and storing an application capable of processing the transaction using the payment vehicle credentials, and AST program instructions thereon. The AST processor is operative with the application and AST program instructions to process payment for the transaction through the AST, and forward a transaction confirmation notification from the AST to the POS terminal, the transaction confirmation notification specifying whether the transaction was successfully or unsuccessfully processed.
The present application provides a white balance processing method and apparatus. The method comprises: recognizing a portrait region in an image; calculating a target white balance gain value according to the area occupied by the portrait region in the image; and performing white balance processing on the image according to the target white balance gain value. The present application resolves the problem of poor user experience due to inaccurate image color restoration caused by a small area proportion of a human face region in an image during white balance adjustment according to the white balance gain value determined according to the area occupied by the human face in the case of a long photography distance.
An Integrated CardioRespiratory (ICR) System is provided for continuous Stroke Volume (SV) measurement using a wearable device comprising a plurality of acoustic sensors. The ICR system performs signal processing computations to characterize cardiac acoustic signals that are generated by cardiac hemodynamic flow, cardiac valve, and tissue motion, and may use advanced machine learning methods to provide accurate computation of SV.

**FIG. 1**

No. of Pages: 32 No. of Claims: 29
An Integrated CardioRespiratory (ICR) System is provided for continuous Ejection Fraction (EF) measurement using a wearable device comprising a plurality of acoustic sensors. The ICR system performs signal processing computations to characterize cardiac acoustic signals that are generated by cardiac hemodynamic flow, cardiac valve, and tissue motion, and may use advanced machine learning methods to provide accurate computation of EF.
**Title of the invention**: A BIOREACTOR COMPRISING AN INTERNAL RESONANT VIBRATORY MOTOR FOR AGITATION OF BIODEGRADABLE WASTE COMPRISING HORIZONTAL AND DIAGONAL EXTENSION SPRINGS

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<td>:WU, Xianggen</td>
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<tr>
<td>Address of Applicant</td>
<td>:2340 Stillmeadow Road Mississauga, Ontario L5B 2G5 Canada</td>
</tr>
<tr>
<td>Name of Inventor</td>
<td>:WU, Xianggen</td>
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The present invention is a resonant vibratory agitation mechanism for installing inside bioreactor containers for agitating and degrading biodegradable waste. It either comprises of a sole layer of horizontally arranged springs with at least one vibration motor installed inside each of the springs, or comprises of a central frame, a plurality of vibration motors fixed on the central frame and a plurality of layers of horizontally or diagonally arranged extension springs. All potential energies generated by the vibration motors and amplified by the springs including sound waves, vibrations, resonant vibratory frequencies and heat are used to agitate and to degrade the biodegradable waste inside a bioreactor container. Fabricating a bioreactor container by assembling a plurality of cylindrical drums on top of a receiving tank not only save manufacture costs but also make it easier to transport and to clean up.
(54) Title of the invention : EXTERNAL PROTECTION DEVICE FOR VEHICLES AND HEADS

(51) International classification :B62J 17/00,B62J 17/08,A42B 3/32
(31) Priority Document No :NA
(32) Priority Date :NA
(33) Name of priority country :NA
(86) International Application No :PCT/CO2017/000004
   Filing Date :10/07/2017
(87) International Publication No :WO/2019/011354
(61) Patent of Addition to Application Number :NA
   Filing Date :NA
(62) Divisional to Application Number :NA
   Filing Date :NA

(57) Abstract :
In a first aspect, the present invention relates to a rigid, aerodynamic external protection device for motorcycle- and bicycle-type vehicles having between two and four wheels. The device is a removable dome formed by multiple overlapping panels that form an oval shell-type structure that protects the vehicle and the rider from the weather and from physical harm in the event of a collision. In a second aspect, the invention relates to a rigid, aerodynamic external protection device for the head, which is formed by multiple overlapping panels that form an oval shell-type structure that protects the user’s skull from the weather and from physical harm in the event of a collision.

No. of Pages : 8 No. of Claims : 7
The present invention relates to a process for preparing a drug delivery composition comprising the steps of:

a) preparing a masterbatch comprising a drug and a first polymer by (i) extruding the first polymer, wherein said first polymer has a melting temperature below 140°C; and (ii) introducing the drug during extrusion of the first polymer, with a drug content between 0.1% and 90%, based on the total weight of the masterbatch; and

b) introducing the masterbatch in a polymer-based matrix during production of the drug delivery composition, wherein step a) is performed at a temperature at which the first polymer is in a partially or totally molten state, and step b) is performed at a temperature at which both the first polymer and at least a polymer of the polymer-based matrix are in a partially or totally molten state.

No. of Pages : 31 No. of Claims : 18
The present invention relates to: an electrode wherein a short-circuit preventing film laminated on the surface of the electrode can prevent a short circuit between a cathode and an anode even when a battery is overheated; a secondary battery using the electrode; and a method for manufacturing the electrode. The secondary battery electrode of the present invention comprises: an electrode current collector; an active material layer formed on the electrode current collector; and a short-circuit preventing film laminated on the active material layer, wherein the short-circuit preventing film comprises a nano web-type porous membrane into which nanofiber strands obtained by electrospinning polyacrylonitrile (PAN) are merged.
MATERIAL COMPRISING A STACK WITH THERMAL PROPERTIES

The present invention relates to a material comprising a transparent substrate on the surface of which a stack of layers is deposited which itself comprises a plurality of functional layers making it possible to act on the solar and/or infrared ray likely to strike said surface. The material comprises a transparent substrate on at least one surface of which a stack of layers is deposited which comprises $n$ silver-based metallic functional layers and $n+1$ dielectric assemblies of layers, $n$ being equal to or greater than 3 and each silver-based metallic functional layer being arranged between two dielectric assemblies of layers. The material is characterized in that the dielectric assembly of layers located below the first silver-based metallic functional layer from the substrate and the dielectric assembly of layers located above the last silver-based metallic functional layer from the substrate, each comprise a layer with a high refractive index, the value of said index being equal to or greater than 2.15 with a wavelength of 550 nm; the value of the refractive index of at least one of the high index layers is equal to or greater than 2.40 with a wavelength of 550 nm; and the value of the ratio of the optical thickness of each of said high refractive index layers to the optical thickness of the dielectric assembly of layers in which it is included is between 0.25 and 0.55. The invention also relates to glazing including such a material.
The present disclosure relates to a communication method and system for converging a 5th-Generation (5G) communication system for supporting higher data rates beyond a 4th-Generation (4G) system with a technology for Internet of Things (IoT). The present disclosure may be applied to intelligent services based on the 5G communication technology and the IoT-related technology, such as smart home, smart building, smart city, smart car, connected car, health care, digital education, smart retail, security and safety services. The present invention provides a method of a base station for supporting an inter-system handover from an evolved packet system (EPS) system to a 5th generation (5G) system. The method comprises receiving, from an access and mobility management function (AMF), a handover request message including E-UTRAN radio access bearer (E-RAB) information and quality of service (Qos) flow information, identifying whether a protocol data unit (PDU) session is accepted or not, determining whether a data forwarding for at least one Qos flow associated with the PDU session is accepted or not based on the E-RAB information and the Qos flow information in case that the PDU session is accepted and transmitting, to the AMF, a handover request acknowledgement message including information on the at least one Qos flow based on the determination. The method solves the data forwarding problem during the movement of a UE between an LTE system and a 5G system, so that the loss of data is avoided and the continuity of services is ensured.
The invention relates to a series compensation device (1) for an electrical energy transmission network (3) having a transformer (7), wherein a primary winding (4) of the transformer (7) can be connected in series in a phase line (L1) of the energy transmission network (3). The series compensation device has a modular multilevel power converter (13), which has a plurality of modules (1_1; 1_n), which form an electrical module series circuit (22). The modular multilevel power converter (13) is connected to a secondary winding (10) of the transformer (7).

FIG 1

No. of Pages : 19 No. of Claims : 10
The present invention relates to substituted xanthine derivatives, pharmaceutical compositions containing them and their use in therapy, particularly in the treatment of conditions having an association with TRPC5 containing ion channels.

No. of Pages : 73 No. of Claims : 16
A wire welding and grinding station (100) comprises a wire welder (112), an AC electrical motor (114) for powering a metal grinder (116), and an AC power supply (110) for supplying electrical power to both the wire welder (112) and the electrical AC motor (114). The station (100) further comprises a soft start module (118) to reduce inrush current demanded by the electrical AC motor (114) while starting. The use of the soft start module (118) allows using a battery (102) as power supply and the use of a battery as power supply has the advantage of practical movability and stable welding currents.
The present invention provides a peptide of formula (I) or a pharmaceutical salt thereof wherein m, n, p, and q represent integers and are selected from 0 and 1; and r is comprised from 1 to 10; a linker biradical of formula (II), which is connecting an alpha carbon atom of an amino acid located at position i in the peptide sequence of formula (I) with an alpha carbon atom located at position i+4 or i+7 in the peptide sequence of formula (I); a C-terminal end corresponding to -C(O)R4; and a N-terminal end corresponding to -NHR5. The peptides of the invention show anticancer activity and an appropriate half-life and stability. Formula (I).

### FIG. 1

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### Abstract

The present invention provides a peptide of formula (I) or a pharmaceutical salt thereof wherein m, n, p, and q represent integers and are selected from 0 and 1; and r is comprised from 1 to 10; a linker biradical of formula (II), which is connecting an alpha carbon atom of an amino acid located at position i in the peptide sequence of formula (I) with an alpha carbon atom of an amino acid located at position i+4 or i+7 in the peptide sequence of formula (I); a C-terminal end corresponding to -C(O)R4; and a N-terminal end corresponding to -NHR5. The peptides of the invention show anticancer activity and an appropriate half-life and stability. Formula (I).
Title of the invention: METHOD AND DEVICE FOR COLLECTING AND SUPPLYING BRAKE FLUID

Abstract:

This device for collecting and supplying brake fluid (10) has a gas-liquid separation tank (20) divided into a lower chamber (26) and an upper chamber (28) with a partition wall (24) interposed therebetween. Connected to the gas-liquid separation tank (20) are: a collection line (46) for collecting brake fluid (16) from the brake system (14) of a vehicle in the gas-liquid separation tank (20); a circulation line (60) for extraction of brake fluid (16) from the lower chamber (26) and the return thereof to the lower chamber (26); and a replenishment line (74) for replenishing the gas-liquid separation tank (20) with fresh brake fluid (16). Air intake for the brake system (14) is performed via a main intake line (36), and air intake for the gas-liquid separation tank (20) is performed via an auxiliary intake line (34). Both the main intake line (36) and auxiliary intake line (34) are connected to an auxiliary tank (22).

No. of Pages: 20
No. of Claims: 10
**Title of the Invention:** PRODUCTION METHOD FOR INSULATED ELECTRICAL WIRE, AND INSULATED ELECTRICAL WIRE

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**Abstract:**
Provided is a production method for an insulated electrical wire. The production method makes it possible for a sealant to efficiently and highly uniformly penetrate between strands when the sealant is used to apply a water-stopping treatment to the insulated electrical wire. The present invention also provides an insulated electrical wire that has high water-stopping performance where a water-stopping treatment has been applied between strands. The present invention involves performing a water-stopping treatment on an insulated electrical wire 1 that has: a conductor 2 that comprises a plurality of intertwined strands that comprise a conductive material; and an insulating coating 3 that covers the outer periphery of the conductor 2. The water-stopping treatment involves: a partial exposure step in which an exposed part 10 at which the insulating coating 3 has been removed from the outer periphery of the conductor 2 and a coated part 20 at which the insulating coating 3 is covering the outer periphery of the conductor 2 are provided along the longitudinal-axis direction of the insulated electrical wire 1 so as to be adjacent; a density modification step in which the intervals between the strands of the exposed part 10 are widened and the density of conductive material per unit length of the exposed part 10 is increased; and a filling step in which the space between the strands of the exposed part 10 is filled with a sealant 5 that comprises an insulating material.

No. of Pages : 47 No. of Claims : 19
(54) Title of the invention: MICROORGANISM FOR PRODUCING HUMAN MILK OLIGOSACCHARIDE

(51) International classification: C07K 14/245,C07K 14/435,C12P 19/18,C12N 9/10,A23L 33/00

(31) Priority Document No: 17184232.1

(32) Priority Date: 01/08/2017

(33) Name of priority country: EPO

(36) Abstract:
Human milk oligosaccharides (HMOs) may be used e.g. as functional ingredients in infant nutrition, medical nutrition, functional foods and animal feed. There is still a need of improved means of producing HMOs. The present invention provides genetically modified microorganisms for the improved production of HMOs and HMO production methods using the same. The microorganisms of the invention may have one or more yield-enhancing modifications, including an inducible lysis system, which allows for the easy extraction of intracellular and extracellular HMOs, lactose permease mutants, which may increase intracellular lactose levels, or chaperones, which may increase intracellular availability of key enzymes for the production of HMOs.

(71) Name of Applicant:
1) OLIGOSCIENCE BIOTECHNOLOGY GMBH
   Address: BioMedizinZentrumDortmund Otto-Hahn-Strae 15 44227 Dortmund Germany

(72) Name of Inventor:
1) PERACHA, Max
2) WEMHOFF, Sabrina
3) MEINHARDT, Friedhelm

(76) No. of Pages: 28 No. of Claims: 15
**Title of the invention:** PLANT CULTIVATION METHOD, PLANT CULTIVATION SYSTEM, AND RACK

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**Abstract:**
Provided are: a plant cultivation method which increases the cultivation area for indoor cultivation of plants; a plant cultivation system; and a rack incorporated in the plant cultivation system. This plant cultivation method comprises the steps of: setting cultivation tanks 2 for cultivation of plants P on racks 1; arranging a plurality of racks 1 so as to be adjacent to one another on a travel line in order of the growth state of the plants P; intermittently moving the racks 1 forward in accordance with the growth state of the plants P; and separating the first rack 1 from the subsequent racks 1 and placing a new rack 1 so as to be adjacent to the rear rack 1 among the subsequent racks 1.
A strip subassembly (2) which may be used to form a takraw ball or a similar woven ball, comprises a backbone strut (4) and one or more pads (6) attached to the backbone strut (4). In the woven ball, the pads (6) form an even surface which is comfortable for the player.
Provided herein are methods of treating diseases, such as cancer, using a combination therapy. In certain embodiments, the methods comprise administering an effective amount of a phosphoinositide-3-kinase (PI3K) inhibitor and an effective amount of a CD20 inhibitor to a patient.
The present disclosure relates to processes for the production of salts and crystalline forms of a compound having the formula.
The present disclosure relates to salts and crystalline forms of a compound having the formula (I): Also described are processes for the production of the salts and crystalline forms described herein.
The present invention relates to novel compounds which are particularly useful for the synthesis of novel chromanol derivatives. These compounds have interesting properties. Particularly, the novel chromanol derivatives have interesting antioxidant properties as well as flavours and fragrances.
**Title of the invention:** HERBICIDAL COMPOSITION

| International classification | :A01N 25/30, A01N 57/20 |
| Priority Document No | :102017000095717 |
| Priority Date | :24/08/2017 |
| Name of priority country | :Italy |
| International Application No | :PCT/EP2018/071701 |
| Filing Date | :09/08/2018 |
| International Publication No | :WO/2019/038102 |

| Name of Applicant | 1) LAMBERTI SPA |
| Address of Applicant | via Piave 18 21041 Albizzate (VA) |
| Name of Inventor | 1) DI MODUGNO, Rocco |
| | 2) BALESTRINI, Andrea |
| | 3) FORNARA, Dario |
| | 4) BLAIR, Lauren |
| | 5) LUGARI, Alessandro |
| | 6) FLORIDI, Giovanni |
| | 7) LI BASSI, Giuseppe |

**Abstract:**
Stable herbicidal compositions containing an ethoxylated esteramine as adjuvant.

No. of Pages: 23  No. of Claims: 13
Deep learning may be used in video compression for in-loop filtering in order to reduce artifacts. To reduce the computation complexity of the neural networks, in one embodiment, a multi-branch CNN is used. The multi-branch CNN may include multiple basic CNNs and an identity filter, where each basic CNN or the identity filter is considered as a branch. At the encoder side, the best branch can be chosen, for example, based on RDO. The best branch can be indicated to or be derived at the decoder side. For similar filtering performance, each basic CNN in the multi-branch CNN can use fewer layers than if the filter is done by a single-branch CNN. At the decoder side, the best branch is used for in-loop filtering. By breaking the symmetry at the encoding and decoding using the CNN, the computation complexity at the decoder side can be reduced.
The present invention provides novel and effective compositions and methods for promoting the growth of green photosynthetic plants, particularly higher plants. The method relies on applying compounds comprising carbon dioxide infused water as a foliar spray to the plant and its leaves, where the compound increases intracellular carbon dioxide levels in an amount sufficient to inhibit photorespiration within the plant cells and thus enhance plant growth.
This disclosure relates to systems and methods for controlling treatment of water with ozone. The systems and methods can utilize one or more processing modules and one or more non-transitory storage modules that are configured to store computing instructions. Execution of the instructions can cause the one or more processing modules to perform acts of: generating ozone; and applying the ozone to water. The act of generating the ozone can include: controlling a quantity of the ozone generated; and controlling when the ozone is generated.
The present invention provides compounds that modulate protein function, to restore protein homeostasis and/or cell-cell adhesion. The invention provides methods of modulating protein-mediated diseases, such as cytokine-mediated diseases, disorders, conditions, or responses. Compositions of these compounds are also provided. Methods of treatment, amelioration, or prevention of protein-mediated diseases, disorders, and conditions are also provided.
**Title of the invention:** INJECTOR CARTRIDGE DOOR LOCKING MECHANISM

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**Abstract:**
An injector includes an injector housing and a cartridge door movably mounted to the injector housing between a fully closed position and an open position. A latching mechanism is movable between a latched position, locking the cartridge door to the injector housing in the fully closed position thereof, and an unlatched position, unlocking the cartridge door from the injector housing, thereby enabling movement of the cartridge door toward the open position. The latching mechanism is oriented in the unlatched position when the cartridge door is empty and the latching mechanism is configured to move to the latched position solely when a cartridge is present in the cartridge door and the cartridge door is subsequently moved to the fully closed position thereof.

**Name of Applicant:**
1) WEST PHARMA. SERVICES IL, LTD.
Address of Applicant: 4 Hasheizaf St. 4366411 Ra’anana Israel

**Name of Inventor:**
1) BAR-EL, Yossi
2) YIGAL, Gil
3) YUDELEVICH, Michael

**No. of Pages:** 9 **No. of Claims:** 7
Title of the invention: COMPOSITIONS AND METHODS FOR THE TREATMENT AND PREVENTION OF COGNITIVE DECLINE AND PRESERVATION OF NEURONAL FUNCTION

Abstract:
Described herein are compositions and methods for the treatment and prevention of cognitive decline in subjects. Generally, among other potential components, the compositions comprise Centella asiatica or an extract thereof; α-tocopherol or a derivative thereof; ginseng or an extract thereof; a selenium compound, and α-lipoic acid. Also provided are methods of making such compositions.

#### Figure 1

![Verbal Learning Accuracy Graph]

No. of Pages: 34
No. of Claims: 13
A urea production process comprises a step of synthesis of urea by reaction of ammonia and carbon dioxide, where at least part of the carbon dioxide for the urea reaction synthesis is produced in an oxy-combustion process; the oxy-combustion process is specifically a flameless oxy-combustion process.
In a wireless communication system (100), an access node (110) configures, for a user equipment, UE (105), each symbol in a slot (68a) individually as one of multiple possible symbol types. The types including an uplink symbol, a downlink symbol, and a different symbol. The access node (110) transmits, to the UE (105), a slot format indicator, SFI, specifying a number of downlink symbols in the slot (68a) and a number of uplink symbols in the slot (68a), and indicating whether or not the slot (68a) includes an unspecified number of different symbols. The UE (105) receives, from the access node (110), the SFI for the slot (68a), and determines the type of each of the symbols in the slot (68a) based on the number of uplink symbols and the number of downlink symbols.
(54) Title of the invention : CHROMATOGRAPHY

(51) International classification : C07K 1/18, C07K 1/16
(31) Priority Document No. : 1711481.0
(32) Priority Date : 17/07/2017
(33) Name of priority country : U.K.
  Filing Date : 16/07/2018

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

(57) Abstract :
The present invention is in the field of purification and protein purification in particular. The invention provides improved techniques for the industrial-scale purification of proteins and other biomolecules. More specifically, it relates to a process for the purification of a compound of interest, such as a protein, preferably an antibody or an antibody fragment using a chromatography step, preferably a semi-continuous chromatography step.

(71) Name of Applicant :
1) UCB BIOPHARMA SRL
   Address of Applicant : Alle de la Recherche 60 1070 Brussels Belgium

(72) Name of Inventor :
1) ROSE, Michael Harry

No. of Pages : 59 No. of Claims : 29
The present invention provides compounds of Formula (I): (I) wherein all of the variables are as defined herein. These compounds are modulators of NLRP3, which may be used as medicaments for the treatment of proliferative disorders, such as cancer in a subject (e.g., a human).

No. of Pages : 268 No. of Claims : 26
The present application discloses a discontinuous reception method, a terminal device, and a network device. The method comprises: a terminal device detecting a downlink control channel sent by a network device, wherein the downlink control channel carries at least one discontinuous reception (DRX) information of at least one terminal device, and the DRX information of each terminal device of the at least one terminal device is used to indicate that each terminal device wakes up or sleeps during an on-duration of a DRX cycle; the terminal device determining the DRX information of the terminal device from the at least one DRX information; and the terminal device determining, according to the DRX information of the terminal device, whether the terminal wakes up during the on-duration or sleeps during the on-duration. Therefore, different terminal devices can simultaneously detect whether the devices have been scheduled in a DRX cycle and detect whether to sleep during on-duration of the DRX cycle if the devices have not been scheduled, thereby reducing power consumption.
A coding method for a time-domain stereo parameter, and a related product. The coding method for a time-domain stereo parameter comprises: determining a sound-channel combination solution of a current frame; determining a time-domain stereo parameter of the current frame according to the sound-channel combination solution of the current frame; and coding the time-domain stereo parameter of the current frame, the time-domain stereo parameter comprising at least one of a scale factor and a time difference between sound channels. The technical solution provided in embodiments of the present application helps to improve the coding and decoding quality.
The invention provides a gesture recognition method, relating to the technical field of human-computer interaction. The method comprises: extracting M frame images from a first video segment in a video stream; performing, by means of a deep learning algorithm, gesture recognition on the M frame images to obtain a gesture recognition result corresponding to the first video segment; and performing result fusion on gesture recognition results of continuous N video segments contained in the first video segment, to obtain a fused gesture recognition result. The recognition process described above does not require segmenting and tracking of gestures in a video stream. The method recognizes progressive actions by means of a deep learning algorithm with a high computation speed. The method also fuses progressive actions, thereby increasing the speed of gesture recognition and reducing delays in gesture recognition.
Disclosed in the embodiments of the present application are a network function information management method and a related device. The method comprises: a management network element acquiring identification information concerning an NRF instance, the NRF instance storing information concerning an NF instance, the identification information being used to indicate the NRF instance associated with the NF instance; the management network element sending a first message to the NF instance or a management unit of the NF instance, the first message comprising identification information concerning the NRF instance; or the management network element establishing an association relationship between the NF instance and the NRF instance according to the identification information concerning the NRF instance. The solution of the embodiments of the present application helps the NF instance to register, update or query information of other NF instances with the NRF instance.
(54) Title of the invention : SCREEN STATE CONTROL METHOD AND DEVICE, STORAGE MEDIUM, AND MOBILE TERMINAL

(57) Abstract :
Provided are a screen state control method and device, a storage medium and a mobile terminal. The method comprises: determining, in a brightly lit environment, the ratio of a performance curve of a proximity sensor at a plurality of specified intervals to an ideal curve; acquiring a first intensity value of a receiving end signal corresponding to a transmitting end of the proximity sensor when the transmitting end is turned ON and a second intensity value of a receiving end signal corresponding to the transmitting end of the proximity sensor when the transmitting end is turned OFF, and respectively compensating for the first intensity value and the second intensity value according to the ratio; and determining, according to compensation for the first intensity value and the second intensity value, a corrected proximity value of the proximity sensor and controlling, according to a result of a comparison between the corrected proximity value and a specified threshold, a screen to be in a black or bright state.

No. of Pages : 30 No. of Claims : 11
(54) Title of the invention : METHOD AND APPARATUS FOR SWITCHING APPLICATIONS IN SPLIT SCREEN MODE, AND RELATED DEVICE THEREOF

(51) International classification : G06F 3/0488
(31) Priority Document No : 201710594360.2
(32) Priority Date : 20/07/2017
(33) Name of priority country : China
(86) International Application No : PCT/CN2018/089020
Filing Date : 30/05/2018
(87) International Publication No : WO/2019/015404
(61) Patent of Addition to Application Number : NA
Filing Date : NA
(62) Divisional to Application Number : NA
Filing Date : NA

(57) Abstract :
Provided in the present application are a method and apparatus for switching applications in a split screen mode, and a related device thereof. The method for switching applications in a split screen mode comprises: when a terminal screen is in a split screen mode, receiving a first selection instruction, wherein the terminal screen is divided into multiple split screen regions, and the first selection instruction is used to select a target split screen region from the split screen regions; upon receiving an instruction to switch applications, displaying one or more switchable applications in the target split screen region; upon receiving a second selection instruction, wherein the second selection instruction is used to select a target application from the one or more switchable applications; and switching an application displayed in the target split screen region to the target application. The application enables a user to switch an application displayed in a selected split screen region to another user specified application according to their needs, such that switching applications in a split screen mode is more convenient and more in line with user requirements.
### Abstract

The present application relates to a macrocycle containing aminopyrazole and pyrimidine, which is represented by formula (I), a pharmaceutical composition thereof, and a use thereof in inhibiting tropomyosin receptor kinase (Trk) activity and in treating diseases in mammals that are mediated by Trk.

No. of Pages : 55  No. of Claims : 15
A system for enhancing an image during a surgical procedure includes an image capture device configured to be inserted into a patient and capture an image inside the patient. The system also includes a controller that applies at least one image processing filter to the image to generate an enhanced image. The image processing filter includes a spatial decomposition filter that decomposes the image into a plurality of spatial frequency bands, a frequency filter that filters the plurality of spatial frequency bands to generate a plurality of filtered enhanced bands, and a recombination filter that generates the enhanced image to be displayed by a display.

FIG. 1

No. of Pages : 14 No. of Claims : 15
The present disclosure relates to a machine and process for in-line sterilization and making of flexible-bags used for packaging flowable and non-flowable materials. The sterilization is incorporated at one or more stages during the process of making the flexible-bag and packaging the product. Stated another way, the present disclosure relates to a process and machine for sterilizing a flexible-bag before and/or after the packaging of the product.
In accordance with an example embodiment of the present invention, disclosed is a method and an apparatus thereof for formatting a payload for transmission of multi-mode speech/audio codec data. The method comprises deciding whether a header-less or a header-full payload format is used for transmission of a coded frame. The decision is based on a codec mode and a required functionality. The payload data is packetized with or without the payload header depending on the decision.
In order to reduce the HS-SCCH overhead, a fixed time allocation approach could be used. In that case, the scheduling time of each VoIP user is semi-static and thus there is no need to transmit e.g. HS-SCCH toward the UE for the initial transmissions, if the UE knows when to receive data on the HS-DSCH and what transport format is used. There are at least two ways of implementing this: 1) HS-SCCH/E-DPCCH signalling to indicate parameters of a first transmission, with subsequent transmissions using the same parameters (and HS-SCCH/E-DPCCH always sent when changes needed), or 2) fixed allocation, RRC signalling used to allocate users and tell the default transport parameters.
The present invention pertains in general to the field of stabilization of FSH formulations, in particular liquid FSH formulations. The stabilization is achieved by the addition of salts comprising pharmaceutically acceptable alkali metal cations, in preferred embodiments by the addition of pharmaceutically acceptable salts, i.e., sodium salts or potassium salts.
(54) Title of the invention : SYSTEM AND METHOD FOR CONVEYING AN ASSEMBLY

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| Filing Date                      | (41) | 04/01/2016     |

(71) Name of Applicant :
1) KING ABDULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
   Address of Applicant : 4700 King Abdullah University Of Science And, Technology, Thuwal, 23955-6900, Saudi Arabia

(72) Name of Inventor :
1) GEORG EITELHUBER

(57) Abstract :
An apparatus, system, and method for conveying an assembly along a track. A rail can include a first planar side, a second planar side, and a third planar side. The first, second, and third planar sides can be arranged to form at least two acute angles. A carriage assembly can include a drive wheel and at least two roller sets. The drive wheel can be configured to contact the first planar side and is configured to translate the carriage assembly along the rail. The at least two roller sets can be configured to contact the two other sides to maintain the carriage in contact with the rail.

No. of Pages : 30 No. of Claims : 12
Title of the invention: NONAQUEOUS ELECTROLYTE BATTERY AND BATTERY PACK

Abstract:
Provided is a nonaqueous electrolyte battery which comprises a positive electrode, a negative electrode, and a separator arranged between the positive electrode and the negative electrode, and a nonaqueous electrolyte. The positive electrode contains a positive electrode active material that contains $\text{Li}^x\text{Ni}_{1-a-b}\text{M}^{c}\text{Co}_a\text{Mn}_b\text{O}_2$ (wherein $0.9 < x \leq 1.25$, $0 < a \leq 0.4$, $0 \leq b \leq 0.45$, $0 \leq c \leq 0.1$, and $\text{M}$ represents at least one element selected from the group consisting of Mg, Al, Si, Ti, Zn, Zr, Ca and Sn). The separator has a pore volume within the range of from 0.9 cm$^3$/g to 3 cm$^3$/g (inclusive) in the pore diameter distribution as determined by a mercury intrusion method and an air permeability within the range of from 2 sec/100 ml to 15 sec/100 ml (inclusive) as determined by a Gurley method (JIS-P-8117), while containing a polyester.

No. of Pages: 53
No. of Claims: 2
No. of Pages : 79 No. of Claims : 8
A bending machine for sheet metal comprises a bending assembly (2) provided with a tool holder crosspiece (3) which is mobile and supports a set (20) of bending tools (40, 41, 42, 43, 44) which are aligned, and mutually positionable, along a first longitudinal direction (A) so as to form predetermined compositions (C₁, C₂, C₃, C₄) of bending tools suitable to bend a workpiece (50) according to respective defined bending lines; the bending assembly (2) comprises moving means (5, 6) to move the bending tools (40, 41, 42, 43, 44) along the crosspiece (3), the set (20) of bending tools comprises, arranged adjacent and in sequence starting from an end (3a) of said crosspiece (3): four first bending tools (41) having a width of X+ p, one second bending tool (42) having a width of X+2-p, one third bending tool (43) having a width of X+3-p, one basic bending tool (40) having a width of X, three third bending tools (43), one fourth bending tool (44) having a width of X+4-p, two basic bending tools (40), one first bending tool (41), one second bending tool (42), a further set (21) of basic bending tools (40), wherein X is a basic width in mm of said basic bending tool (40) comprised between 30 and 70 mm, and p is a step between two lengths of subsequent tool compositions (C₁, C₂, C₃, C₄), comprised between 5 and 20 mm; the combination of one or adjacent more tools (40, 41, 42, 43, 44) of said set (20) of bending tools allowing obtaining bends having all the lengths starting from a minimum bending length equal to said basic width (X) with said step (p).
**Title of the invention:** AN AZEOTROPIC OR AZEOTROPE-LIKE COMPOSITION

**International classification:**
- C01B 7/19, C07C 21/18, C07C 21/10, C07C 19/08

**Priority Document No:**
- 61/445,776

**Priority Date:**
- 23/02/2011

**Name of priority country:**
- U.S.A.

**International Application No:**
- PCT/US2012/025908

**Filing Date:**
- 21/02/2012

**International Publication No:**
- WO/2012/121876

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

**Divisional to Application Number:**
- 6995/DELNP/2013

**Filing Date:**
- 06/08/2013

**Abstract:**
The present invention pertains to ternary azeotrope and azeotrope-like composition including 2-chloro-3,3,3-trifluoropropene (HCFO-1233xf), HF, and either 1,1,2,3-tetrachloropropene (TCP) or 1,1,1,2,2-pentafluoropropane (HFC-245cb). The present invention also relates to binary azeotropes of 2,3,3,3-tetrafluoropropene and HF. Such azeotropic and azeotrope-like compositions are useful as intermediates in the production of 2,3,3,3-tetrafluoropropene (HFO-1234yf).

**Name of Applicant:**
1) HONEYWELL INTERNATIONAL INC.
   - Address: Patent Services M/S AB/2B, 101 Columbia Road, P.O. Box 2245, Morristown, New Jersey 07962-2245, United States of America U.S.A.

**Name of Inventor:**
1) RYAN HULSE
2) HANG T. PHAM
3) HSUEH SUNG TUNG
4) KONSTANTIN A POKROVSKI
5) DANIEL C. MERKEL
**Title of the invention:** NEW POLYMORPHIC FORMS OF MINOCYCLINE BASE AND PROCESSES FOR THEIR PREPARATION

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<td>1) HOVIONE SCIENTIA LIMITED</td>
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<tr>
<td>Address of Applicant: Loughbeg, Ringaskiddy, Cork, IRELAND Ireland</td>
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<td>1) MENDES, Zita</td>
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<td>2) CACELA, Constanșa</td>
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<td>3) TEN FIGAS, Gloria</td>
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<td>4) FERNANDEZ CASARES, Ana</td>
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(57) Abstract:
The present invention concerns new forms of crystalline minocycline base. In particular, two new crystalline polymorphic forms, designated Form IV and Form V of minocycline base are provided. These are characterized by XRD, FTIR and TGA. Processes for preparing the new polymorphic forms and their use in pharmaceutical compositions are also provided. Form IV and form V are prepared by dissolving and/or suspending minocycline base in an organic solvent followed by crystallization.
Title of the invention: EMBEDDED CLOCK RECOVERY

Abstract:
Systems and methods for synchronizing a source and sink device are disclosed. A sink device can efficiently determine the source data rate even in cases where the sink device is not directly coupled to the source device. A method for transmitting a source data stream from a source device to a sink device includes, forming a logical channel from a source device to a sink device, where the logical channel is configured to carry the source data stream, and one or more rate parameters. The rate parameters relate a data rate of the source data stream to a data rate of the logical channel. A method for a sink device to recover a source data rate includes, detecting a logical channel in a received data stream where the logical channel includes the source data stream, recovering one or more rate parameters from the received data stream, determining a data rate of the logical channel, and determining the data rate of the source data stream based on the data rate of the logical channel and the one or more rate parameters. Corresponding systems and computer program products are also described.
A punching apparatus comprises a beating element (2) that is arranged for interacting with at least one punching tool (30) and is movable inside containing means (3) along and around a work axis (A), a first rotating actuator (4) coupled by transmission means (10) to the beating element (2) for moving the latter linearly along the work axis (A) between an internal operating position (R) and an external operative position (T) and driving the punching tool (30), a second rotating actuator (5) connected to the beating element (2) and arranged for rotating the latter around the work axis (A), in particular for angularly orienting the punching tool (30); the second rotating actuator comprises a second electric motor (5) provided with a stator (51) fixed to the containing means (3) and a rotor (52) that is internal and coaxial with the stator (51) and connected to the beating element (2) in such a way as to rotate with the latter, the rotor (52) extending along the work axis (A) in such a way as to face, and be engaged with, said stator (51) between the operating positions (R, T) to rotate around the work axis (A) when the second electric motor (5) is operated.
Title of the invention: A GLASS- CERAMIC ARTICLE

Abstract:
The present invention relates to a glass-ceramic article comprising: Li2O in an amount of 5-14 wt%; SiO2 in an amount of 69-80 wt%; Al2O3 in an amount of 2-9 wt%; and a petalite crystalline phase comprising 20 to 70 wt% of the glass-ceramic article, wherein the article is transparent and has a transmittance of at least 85% for light in a wavelength range from 400 nm to 1,000 nm at a thickness of 1 mm.

No. of Pages : 65 No. of Claims : 20
Glass and glass ceramic compositions having a combination of lithium silicate and petalite crystalline phases along with methods of making the glass and glass ceramic compositions are described. The compositions are compatible with conventional rolling and float processes, are transparent or translucent, and have high mechanical strength and fracture resistance. Further, the compositions are able to be chemically tempered to even higher strength glass ceramics that are useful as large substrates in multiple applications.
A tripod tower assembly for coupling a power generative source is disclosed. The tower assembly includes a lattice telecom tower. The lattice telecom tower is characterized therein for coupling a power generative source. Here, each of three limbs of the lattice telecom tower is mechanically coupled with a three connecting legs. The three connecting legs is coupled via a mechanical means. Each of the three connecting legs converges at pre-defined angle to form a central axis base. Furthermore, a plurality of poles is placed perpendicular to each other over the central axis base. The plurality of poles is configured to hold the power generative source at pre-defined height. Here, electricity produced by the coupled power generative source may be used by telecom tower for continuous running.
**Title of the invention:** RETROREFLECTOR FOR USE IN TOUCH SCREEN APPLICATIONS AND POSITION SENSING SYSTEMS

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**Abstract:**

A position detection system (100) comprising: at least one source of electromagnetic radiation (110, 112) for outputting an electromagnetic radiation over at least a portion of a detection area (104); and a camera (115, 116) positioned to receive electromagnetic radiation reflected from a prismatic film (108) positioned along a periphery of at least a portion of the detection area (108), wherein the prismatic film (108) includes a retroreflective substrate, the retroreflective substrate having a plurality of triangular cube corner retroreflective elements formed in a first surface and a smooth second surface opposite the first surface, a first substrate disposed over at least a portion of the smooth second surface, a second substrate disposed between the first substrate and the smooth second surface and the retroreflective elements have a cant in a range of between about 4 degrees in a face more parallel direction to 18 degrees in an edge more parallel direction and a cube depth between about 0.002 and 0.008 inches; wherein base edges of the cube corner reflective elements (140) are linear and in common plane, wherein each cube corner reflective elements forms an isosceles triangle cube shape with two of the base edges being approximately the same length, and wherein cube corner depth is determined by a constant (K) multiplied by a size of the viewing area of the display.

**Name of Applicant:**
1) AVERY DENNISON CORPORATION
   Address of Applicant: 150 North Orange Grove Blvd., Pasadena, California, 91103, United States of America U.S.A.
2) NEXT HOLDINGS LTD.

**Name of Inventor:**
1) STEVEN R. CHAPMAN
2) SIMON BRIDGER
(54) Title of the invention: MICROBIOCIDAL HETEROBICYCLIC DERIVATIVES

(51) International classification: C07D 401/04,A01N 43/52,A01P 3/00
(31) Priority Document No: 15161494.8
(32) Priority Date: 27/03/2015
(33) Name of priority country: EPO
(86) International Application No: PCT/EP2016/056127
(87) International Publication No: NA
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(62) Divisional to Application Number: 201717031091
(71) Name of Applicant:
1) SYNGENTA PARTICIPATIONS AG
   Address of Applicant: Schwarzwaldallee 215, 4058 Basel, Switzerland

(72) Name of Inventor:
1) BOU HAMDAN, Farhan
2) QUARANTA, Laura
3) TRAH, Stephan
4) WEISS, Matthias

(57) Abstract:
Compounds of the formula (I) wherein the substituents are as defined in claim 1. Furthermore, the present invention relates to agrochemical compositions which comprise compounds of formula (I), to preparation of these compositions, and to the use of the compounds or compositions in agriculture or horticulture for combating, preventing or controlling infestation of plants, harvested food crops, seeds or non-living materials by phytopathogenic microorganisms, in particular fungi.

No. of Pages: 98 No. of Claims: 15
The present disclosure relates to a device and a method for encoding an image and a device and a method for decoding an image with which it is possible to suppress increases in the load of encoding/decoding. The current layer in image data consisting of a plurality of layers is encoded or decoded by referencing, for said current layer in said image data, encoding-related information for some regions in another layer that is encoded in units of predetermined regions into which a picture is divided, said referencing being performed in accordance with control according to control information which controls the region in said other layer from which the encoding-related information is to be referenced. The present disclosure is applicable, for example, to image processing devices, such as image encoding devices that scalably encode image data, or image decoding devices that decode encoded data obtained by scalably encoding image data.
Provided is a method which is capable of efficiently producing a halogen compound that is useful as a precursor for a compound which is favorably used particularly in optical materials in general. A method for producing a halogen compound, which is characterized by comprising a step for producing a halogen compound represented by general formula (2) by reacting a compound represented by general formula (1) with a halogenation agent. (In general formula (1), \( R_1 \) represents a linear or branched alkylene group; \( R_2 \) represents an aromatic ring-containing group that has a carbon atom constituting the aromatic ring in the binding site with the oxygen atom expressed in the formula; and \( n \) represents 1 or 2, and in cases where \( n \) is 2, the two \( R_1 \) moieties may be the same as or different from each other.) (In general formula (2), \( R_1, R_2 \) and \( n \) are as defined in general formula (1); and \( X \) represents a halogen atom, and in cases where \( n \) is 2, the two \( X \) moieties may be the same as or different from each other.)
A wireless terminal (3) has a function in which a second wireless connection in a second cell (20) operated by a second wireless station (2) is established while a first wireless connection in a first cell (10) operated by a first wireless station (1) is being established. The first wireless station (1) sets a control bearer for forwarding a control signal related to at least the wireless terminal (3) between a higher-level network (4) and the first wireless station (1). In addition, the first wireless station (1) is configured so as to trigger a second bearer setting for forwarding user data of the wireless terminal (3) between the higher-level network (4) and the second wireless station (2). Thus, bearers can be simultaneously set for a plurality of wireless stations for one wireless terminal in order to achieve carrier aggregation of a plurality of cells operated by different wireless stations, for example.