



2nd Conference on IPR, Patents, Copyrights, Innovations & Startups February 18-20, 2021

India's Pioneering Conference to Bring Inventors & Investors
on a Common Platform in View of Commercialization of IPR



Organized by

PIMPRI CHICHWAD EDUCATION TRUST's

**Pimpri Chinchwad College of Engineering & Research
Ravet, Pune - 412 101**

In Illustrious Association With...





Pimpri Chinchwad Education Trust's
PIMPRI CHINCHWAD COLLEGE OF ENGINEERING AND RESEARCH,
Laxminagar, Ravet, Pune-412101 (Maharashtra)
**CONFERENCE ON IPR, PATENTS, COPYRIGHTS,
INNOVATIONS & STARTUPS (CIPCIS 2020)**



OUR INSPIRATION



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Ex-President
Pimpri Chinchwad Education Trust



Late. Smt. Lilatai Shankarrao Patil
Founder Chairman
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ABOUT PCET TRUST, NIGDI, PUNE

Pimpri Chinchwad Education Trust (PCET), a brand in the field of education was established by late Shri. Shankarrao B. Patil in the year 1990 with a vision to provide value-added educational platform to the society in multiple dimensions from Nursery to Doctoral programs in various professional streams, enabling students to be empowered through Education. Situated at an approachable location near Akurdi Railway Station, Nigdi, Pune, PCET is a well-established and time tested brand in Education since 1990. PCET has seven Institutes and also support Nutan Maharashtra Vidya Prasarak Mandal's NCER and NMIET.

- Pimpri Chinchwad College of Engineering
- Pimpri Chinchwad College of Engineering and Research
- Pimpri Chinchwad Polytechnic
- S. B. Patil Institute Of Management
- S. B. Patil Public School
- S. B. Patil College of Science & Commerce
- S. B. Patil College of Architecture
- Nutan Maharashtra Institute Of Engineering & Technology
- Nutan Maharashtra Vidya Polytechnic
- Nutan College of Engineering & Research

ABOUT PCCOER, RAVET, PUNE

The institute was established in the year 2014. It is a rapidly growing Institute under the umbrella of Pimpri Chinchwad Education Trust (PCET). We follow the Five - Pillar - Philosophy Academics, R&D, T&P, Students Development, Ethics & National Pride in the overall development of students. The University results are among the Top Five Institutes under Savitribai Phule Pune University. PCCOER has created and developed a milestone in Training and Placements. In Research and Innovation, we stand at the pinnacle with 134+ patents and 260+ copyrights in a span of two years. Our students are regular participants in co-curricular & extracurricular activities like BAJA, Go-Kart, Robocon, TIFAN, Purushottam Karandak, Firodiya Karandak, Dajikaka Gadgil Karandak, etc.



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ABOUT CIPCIS-2020

After the grand success of **CIPCIS2019**, **CIPCIS2020** again comes with sincere efforts to bring together investigators/panelists from across India, to share their insight in diverse domains of Intellectual Property (IP).

It is going to provide a common platform for the inventors, investors and investigators to discuss and share knowledge and experience on recent innovations, technological advancements, intellectual properties and development issues. This conference also strategizes on how best to benefit from the IP systems and commercialization through startups.

CIPCIS2020 aims - inline to the Nation's vision – at emerging as a five trillion dollars economy through Research, Innovation and creation of Wealth through IPR.

CIPCIS2020 stands for the inventors to showcase their IPR to the Capitalists and for Investors who are looking for new products and Innovation to convert into commercialized product for the society.

OBJECTIVES

IPR is a well-built tool to care for investment of time, money and efforts of the inventor of the intellectual property by granting exclusive rights for the creation of the inventors.

The preliminary objective of **CIPCIS2020** is to provide a common platform for patentees, experts, academicians as well as the future inventors at large, to interact and exchange their innovative ideas and knowledge pertaining to the emerging issues and challenges in the field of IPR.

Other objectives of **CIPCIS2020** are;

- To help inventors to protect their research and create opportunities for revenue generation.
- To help inventors to overcome the challenges of establishing technology, expertise, knowledge, resources and facilities in all scientific discipline.
- To bridge the gap between the inventors and investors for commercializing new products for the society and the Nation.

CIPCIS2020, February 18-20, 2021



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- To help new future innovators to learn recent developments and technological advancement going on in the field of Intellectual Property.
- To create awareness in the field of IPR, its violations and fighting the threat of forging and piracy to enhance IP culture.
- To provide the platform and guideline to publish the IPR.

IP DOMAINS

The Intellectual Properties and Startups are expected in, *but not restricted to*, the following domains;

- Industrial Electronics
- Mechanical/Automobile Engineering
- Biomedical Science/Pharmaceuticals
- Civil Engineering
- Agriculture
- Covid19
- Others

GUESTS & KEYNOTE SPEAKERS OF CIPCIS2020

Hon'ble Mr. Vikram Salunke, MD, Accurate Gauging & Instruments Pvt. Ltd.

Hon'ble Mr. Sanjeev Pendharkar, Director, VICCO Laboratories

Hon'ble Dr. B. K. Sahu, Manager, IPR, Intellectual Property Facilitation Center, NRDC

Hon'ble Dr. Raj Hirvani, Emeritus Professor at AcSIR, Adjunct Faculty, IIT Bombay

Hon'ble Dr. Amit Kumar Tiwari, Head, IP, Symbiosis Center for Research & Innovation, SIU

Hon'ble Mr. Sitaram Rammohan, Head, IP, M&M, Mahindra Research Valley

Hon'ble Mr. Abhishek Magotra, MS Law Partners

Hon'ble Mr. Abhay Phansikar, Ex-Chairman, IEEE, Corporate Strategy & Technology Consultant

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Dr. Sham Mankar HoD Mechanical Dept

Prof. Sudarshan Bobade HoD, Civil Dept

Prof. Tushar Gaikwad FE Coordinator

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Prof. K. K. Ghosh Chairman, Pune Local Center, IEI

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Message

I am pleased to know that CIPCIS2020, the 2nd Conference on IPR, Patents, Copyrights, Innovations & Startups is being organized by Pimpri Chinchwad College of Engineering & Research, Ravet for various domains such as Electronics, Mechanical, Computer, Civil, Pharmaceuticals, Covid19 and Agriculture on February 18-20, 2020. On behalf of Pimpri Chinchwad Education Trust (PCET), I heartily welcome the eminent Guests, Industrialists, Inventors and all the Delegates to CIPCIS2020.

PCET strives to provide world class academic and cultural foundation to every child to realize his/her greatest potential emphasizing Social, Emotional, Physical, and spiritual development, making the child an extrovert, to meet the challenges of life with a positive attitude and great confidence. PCET has established itself as a brand in the field of education in Maharashtra. It's a success story of a socially committed management which has a clear vision to work for the society. The journey of PCCOER began five years back, under the umbrella of Pimpri Chinchwad Education Trust (PCET), with a vision to serve the society through value added quality education and also promote research and innovation.

The journey of these six years of PCCOE&R is remarkable and in view of promotion of research and innovation, the initiative of organizing the conference taken by PCCOER is appreciable. I would like to congratulate faculties and staff of Pimpri Chinchwad College of Engineering & Research, Ravet for organizing CIPCIS2020. I take this opportunity to wish the team a grand success and memorable time to all the participants at CIPCIS2020.

Dnyaneshwar P. Landge
Chairman
Pimpri Chinchwad Education Trust, Pune
Chief Patron, CIPCIS2020



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Message

Wealth creation through IPR can be the key to success for Technical Institutes and can further be the path to chase the goal of *India; a 5 Tr. \$ economy*.

The data of Global Innovation Index and the number of Patents per year shows a positive inclination. We, as a Nation, have improved our position from 81st to around 51st in Global Innovation Index and the number of patents granted per year has also increased to around 14000 from around 6000 in last 5 years. The numbers and the trend are encouraging but the commercialization and wealth creation through IPR is a challenge. The main objective of the 2nd Conference on IPR (CIPCIS2020) is revenue generation through Technology transfer. The Conference CIPCIS2020 provides a platform to connect the Inventors and Industry/Investors.

We expect success stories in the form of Technology transfer and commercialization of IPR which will boost the IPR culture further in the Society. We at PCCOER are committed to achieve the goal of Wealth creation through IPR and make the dividends reach to our Stakeholders especially the faculty, students and Society in general. CIPCIS2020 is the pioneering step towards the goal where, the Technical Institutes and Universities will have a big share in the Indian economy (GDP).

On behalf of Pimpri Chinchwad Education Trust (PCET), my team at PCCOER, and all my student volunteers, I thank the Inventors, Inventors, Delegates and my students who have contributed wholeheartedly to make CIPSIS 2019 a grand successful.

Dr. Harish U. Tiwari
Principal, PCCOER, Ravet, Pune
Patron, CIPCIS2020



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Message

It is a pleasure to welcome you to the 2nd Conference on IPR, Patents, Copyrights, Innovations and Startup (CIPCIS2020) organized online by Pimpri Chinchwad College of Engineering & Research, Ravet, Pune on February 18-20, 2021. CIPCIS is the flagship conference of the PCCOER and represents one of the largest gatherings of Inventors and Industry professionals in fields of Industrial Electronics, Mechanical, Automobile, Computer, Biomedical Science, Civil, and Pharmaceuticals & Agriculture.

As a Conveners of CIPCIS2020, we sincerely thank Pimpri Chinchwad Education Trust (PCET) for giving a wide scope to organize this event, the Patron, Dr. Harish Tiwari, Princial, PCCOER, for his advice and brilliant suggestions on organizing this conference. We also acknowledge that the success of the conference depends largely on the Illustrious Associates and Sponsors, Guests, Keynote Speakers, Industrial Dignitaries, Delegates, various Committee Members and Student Volunteers and we take this opportunity to express our gratitude towards them.

It has been a great privilege for us to serve as the Conveners of CIPCIS2020 and it is our hope that you find the conference stimulating, fulfilling and enjoyable. We thank you for your support towards CIPCIS2020 and your attendance, and wish you a pleasant experience and fruitful outcome at CIPCIS2020.

Dr. Sameer Sawarkar
Prof. Rahul Bawane
Prof. Sandeep Borgaonkar
Dr. Rahul Mapari
Dr. Archana Chaugule
Dr. Sham Mankar
Prof. Sudarshan Bobade
Prof. Tushar Gaikwad
Conveners, CIPCIS2020



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CIPCIS 2020: P- 002	IN 201821046234, US 16/364,393	Method and a System for Detecting an Intrusion on a Network	Nisha T N, nisha@scit.edu, 8698762275
CIPCIS 2020: P- 003	201921052371	A Smart Tool for Testing Deficient Elements in Soil	Vijayalaxmi S. Kumbhar, vijayalaxmi.kumbar@pccoer.in, 8390455493
CIPCIS 2020: P- 004	202021041965	Potter's Wheel Rotates By Ratchets Mechanism	Dr Nandkishor M Sawai, nandkishor_sawai@rediffmail.com, 9921194785
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CIPCIS 2020: P- 006	-	Laundry Aggregator System	Sachin Singh, sachins2104@gmail.com, 7875298621
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CIPCIS 2020: P-058	201721025740	Non-Newtonian Fluid Mobile Casing Absorbing Impact Shock and Providing Fluid Cushioning Grip	Nilima Baliram Gadge, nilimagadge80@gmail.com, 7558545385
CIPCIS 2020: P-059	201921038631	5-Cylinder Tw0-Stroke Radial Turbo-Charged Gasoline Engine for Helicopter and the Like	Pradip Shivaji Mohite, <i>At. Post – Wangi, Tal. - Kadegaon, Dist. - Sangli, – 415305, Maharashtra, India</i>
CIPCIS 2020: P-060	201621017763	Advance Speed Control System Using Wireless Communication	Seema Vijaykumar Kedar seemaahkeddar@gmail.com, 9822439053
CIPCIS 2020: P-061	-	System And Method For Predicting Heart Disease Risk Factors	Seema Kedar, seemaahkeddar@gmail.com, 9822439053
CIPCIS 2020: P-062	20172023790	System And Method For Predicting Human Emotional State	Seema Kedar, seema_kedar@yahoo.com, 9822439053
CIPCIS 2020: P-063	2186/MUM/2015	Driver Aligned Seat Belt Position Sensor To Avoid False Use Of Seat Belt Safety System	Mandhara Neeta Amol, na.624@rediffmail.com
CIPCIS 2020: P-064	158/MUM/2015	An Auto-Adjustable Headlamp Of The Vehicle For Safety purpose	Mr. Pranav Pradip Patil, nranaVpatil409@gmail.com, 9975525234
CIPCIS 2020: P-065	4718/MUM/2015	Effective Attendance Monitoring Using Smart-Phone	Pankaj Ganesh Anjankar, Pankajanjankar@Gmail.Com,
CIPCIS 2020: P-066	157/MUM/2015	Optimization Of Overhead Conveyers For Noise, Vibration Reduction & Stable Operation	Shinde Manoj Prakash, manoj_shinde2002@yahoo.com, 9665456635
CIPCIS 2020: P-067	159/MUM/2015	An Alteration In A Pen For Easy Viewing Ability	Amey Shirish Joshi, Joshiamey1989@Gmail.Com, 9420863831
CIPCIS 2020: P-068	1016/MUM/2015	A Mobile-Portable Water Heater Attachable To Any Given Water Outlet Working On Domestic Electrical Supply	Mr. Shubham Thakur, shubhamthakur.thrives@gmail.com, 8975698437
CIPCIS 2020: P-069	965/MUM/2015	A Portable Grinding Fixture For Regrinding Of Single Point Cutting Tool Of Lathe Machine	Mr. Parimal Vikas Gundawar, gundawarparimal@gmail.com,



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-070	455/MUM/2015	Solar Powered Portable Bucket Air Conditioner	Mr. Ajinkya Rajendra Wankhade, ajinkya74@gmail.com, 808716943
CIPCIS 2020: P-071	1614/MUM/2015	Modified Paper Sheet Perforator Cum Stapler	Agrawal Mohit Daudayal, Pimpri Chinchwad College Of Engineering, Sector 26, Pradhikaran Nigdi, Pune-411044, Maharashtra State
CIPCIS 2020: P-072	2127/MUM/2015	A Clinical Thermometer For Rural India	Mr. Atharva Pravin Ghate, atharva1995@yahoo.co.in,9881476258
CIPCIS 2020: P-073	3433/MUM/2015	A System Which Gives An Indication Before The LPG Cylinder Is Completely Empty And System Gives The Time For Which LPG Is Utilized	Mr Shubham Sanjay Jangam, Pimpri Chinchwad College Of Engineering, Mechanical Engineering Department, Sector 26, Pradhikaran
CIPCIS 2020: P-074	3106/MUM/2015	Integrated Wireless Online Oil Condition And Oil Level Monitoring System For I C Engine	Mr. Vikrant ulhas garud, Vicky_garud100@yahoo.co.in, 7774076967
CIPCIS 2020: P-075	4157/MUM/2015	System For Monitoring And Identifying The Working Status Of Appliances In A Network	Dwivedi Avinash Kumar, Kanth Complex,Dehuroad 412101,Kasarwadi,PunePritam Corner,Nalegaon,A.NagarPradhikaran-26,Akurdi,Pune-44.
CIPCIS 2020: P-076	4828/MUM/2015	Automatic Waste Segregator	Muaaj Ahmed Bagban, muaazl503@gmail.com
CIPCIS 2020: P-077	4614/MUM/2015	Wallet Protection And Monitoring Using Smartphone	Harshawardhan S. Kumbhar, harsh.s.kumbhar@gmail.com 8149244664
CIPCIS 2020: P-078	4488/MUM/2015	Smart Boxes Notifying Unavailability Of Grocery	AMIT P KULSUNDAR, amitkulsundar7@gmail.com
CIPCIS 2020: P-079	4615/MUM/2015	Programmable Meal Feeding Robotic Arm For Handicapped	Harshawardhan.S. Kumbhar, harsh.s.kumbhar@2mail.com, 8149244664
CIPCIS 2020: P-080	158/MUM/2015	An Auto-Adjustable Headlamp Of The Vehicle For Safety Purpose	MR. PRANAV PRADIP PATIL, Nranavpatil409@Gmail.Com, 9975525234
CIPCIS 2020: P- 081	201921052215	Sign language Communication with Dumb and deaf people	Shrushti Sanjay Kumbhar, shrushkumbhar74@gmail.com, 9130264393
CIPCIS 2020: P- 082	CBR No. 27140	Fault Detection of Industrial Pipes using application of image processing	Snehal Atul Aher-Gholap, snehalgholap08@gmail.com, 8600268810
CIPCIS 2020: P- 083	48/2020 Dated - 27/11/2020 Page number - 59592	Nanotechnology-Based Drug Delivery Systems and Herbal Medicines	Dr. Sohan S. Chitlange, Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P- 084	48/2020 Dated - 27/11/2020 Page number - 59590	Method of Preparation of Nano-Emulsion with its Anti-Aging Action	Dr. Sohan S. Chitlange, Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P- 085	48/2020 Dated - 27/11/2020 Page number – 59591	Identification of New Compounds Aurantiamide Acetate from Phyllanthus Amarus and Peonidine 3-O-Sophoroside -5-O Glucoside from Hibiscus Rosa-Sinensis	Dr. Nagore Dheeraj, Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P- 086	48/2020 Dated - 27/11/2020 Page number – 59587	Biodegradable Bacoside Nanoparticles – Potential Molecule for Memory Impairment Disorders	Dr. Santosh S Bhujbal, Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P- 087	48/2020 Dated - 27/11/2020 Page number – 59586	Methods and Process for the Biodegradable Nanoparticles of Bacopa Extract	Dr. Santosh S Bhujbal, Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P- 088	48/2020 Dated - 27/11/2020 Page number – 59584	Anti-Obesity Fractions Prepared from Phyllanthus Amarus and Hibiscus Rosa- Sinensis and its Method of Preparation	Dr. Gandhi Sejal Prakash, Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P- 089	202021025427 is published on 28.08.2020 by Indian Patent Office (Mumbai Branch)	A Method and Composition for Purification of textile waste-water	SmitaJadhav, jsmita05@gmail.com, Contact 7506033887
CIPCIS 2020: P- 090	201921045512A, PCT/IB2019/061276	A System and Method for Treatment of Textile Waste-Water	Shreyas Anant Bapat, shreyasbapat111@gmail.com, Contact- +91 9921353505
CIPCIS 2020: P-091	201921038636	Detection of Crop Diseases Using Image Processing & Atmospheric Condition and Suggesting Remedy	Pradnya Vitthal Dhende, <i>Walchand College of Engineering, Sangli. Vishrambag, SANGLI-416415 (M.S.), India</i>
CIPCIS 2020: P-092	201821004386	Alteration in Bike Helmet for Better Audibility During Riding By Providing Air Breath Sliding Windows	Dhanaji Raghunath Jadhav, Nutan Maharashtra Vidya Polytechnic, Mechanical Department, TalegaonDabhade, Pune, 410507, Maharashtra, India
CIPCIS 2020: P-093	201821012927	An Automatic Potato Sowing Mechanism	Rushikesh Shivaji Gambhire, Computer Department, Alard College of Engineering, Marunji, Hinjewadi, Pune, 411057, Maharashtra, India.
CIPCIS 2020: P-094	201821012925	Alteration in Heating System by Using Additional Submerged Coil Hot Air Heating System	RanjanaUddharao Dhote, G2-111, Indra Park, Near Police Station, Chinchwadgaon, Pune, (MS) India.
CIPCIS 2020: P-095	201821039900	Illumination Sensing System to Give Automatic Passing Indication to Opposite Vehicle Head Lamps	Sandeep Prakash Patil, Flat No. 604, Devrai Phase-2, Sr. No. 82/P, Near Bapdev Chowk, Kiwale, Tal.- Haveli, Pune – 412101, Maharashtra, India.
CIPCIS 2020: P-096	201821004395	Self Adjusting Traffic Signal Timing By Monitoring Traffic Flow	Sangita Sanjay Mane, Hill Top Recidency, P-4/201, Behind Akurdi Railway Station, Ravet, Pune, PIN-412101, Maharashtra, India..



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CIPCIS 2020: P-097	201821012926	Inbuilt Lifting and Caterpillar Tracks Drive for to Pull out Vehicle When Wheel is Sink into Soil	Sarthak Gajendra Kshirsagar, Flat No. 3, Plot No. 103, Krushnai Appartment, Rao Colony, Talegaon Dabhade, Pune, 410507, Maharashtra, India
CIPCIS 2020: P-098	201821049528	Vehicle Tire Wear Out Engraved Studs Indicator	Sayali Nitin Mane, E-601, Runals Royal Casa, Near Bank of Maharashtra, Ravet, Tal.- Haveli, Pune – 412101, Maharashtra, India.
CIPCIS 2020: P-099	IPR APPLICATION / PATENT NO. – 201821006522	Magneto-Rheological Strut for Light Commercial Vehicle	Rahul Nagnath Yerrawar, Flat No. 404, Opulence, Behind Premia Society, Narhe Dhayari Road, Narhe, Pune PIN 411041, Maharashtra, India.
CIPCIS 2020: P-100	201821004392	Automatic Opening and Closing of Two Wheeler Foot Rest Controlled By Ignition Switch On/Off Position	Amol Subhash Khursule, 430 Shukrawar Peth, Dabhade Aali, Talegaon Dabhade, Tal.- Maval, Dist. – Pune, PIN - 410507, Maharashtra, India.
CIPCIS 2020: P-101	4958/MUM/2015	Brainy Traffic Control System	Bidya Priyankumar Vidyanand, bidyapriyank001 @gmail.com, 8237789898
CIPCIS 2020: P-102	2186/MUM/2015	Driver Aligned Seat Belt Position Sensor To Avoid False Use Of Seat Belt Safety System	MANDHARA NEETA AMOL Na.624@Rediffmail.Com, 9226094864
CIPCIS 2020: P-103	157/MUM/2015	Optimization Of Overhead Conveyers For Noise, Vibration Reduction & Stable Operation	SHINDE MANOJ PRAKASH, Manoj_Shinde2002@Yahoo.Com, 9665456635
CIPCIS 2020: P-104	201621009917	Renewable Energy Portable Laptop Charger	MR. CLEON FRANCIS FERNANDES, cleon.fernandes@yahoo.com, 8552004109
CIPCIS 2020: P-105	201621004333	An Innovative Lead Of Lead Pencil With Marking On Lead	Mr.Kadam Suyog Rajabhau, suyokadam1996@gmail.com , 9404202147
CIPCIS 2020: P-106	201821020932	Design And Development Of Car Seat Constrainer System	Vivekanand Naikwadi, naikwadivivek@gmail.com, 9970226802
CIPCIS 2020: P-107	201621022091	Utilization Of Heat Released During Cooking With Heat Pipe Embedded Thermal Energy Storage	SIDDHANTHA SHANDILYA, sshandilya42@gmail.com, 8237812926
CIPCIS 2020: P-108	201621012927	Novel Wiper Mechanism For Controlled Cleaning Of Windscreen	ANIKET VILAS BOROLE, borole.aniket51@gmail.com, 9511901065
CIPCIS 2020: P-109	201821035732C	Burning Feet Sole Cooler	Tamboli Ayub Alamso, Zeal College of Engineering & Research, Sr.No.39, Narhe, Pune -411041
CIPCIS 2020: P-110	201621042088	An Innovative Base Adjustable Two In One Stapler Punching Machine With A Two-Hole Punching Mechanism	MR. JAYESH PATIL, jspatil1230@outlook.com, rahul.gujar@pccoepune.org
CIPCIS 2020: P-111	201721008215	Synchronized Power Windows With Auto Air Conditioners For Reducing Human Efforts And Power Wastage	MR. LOHAR GANESH SAYAJI, loharganesh16@gmail.com, 09561351237



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CIPCIS 2020: P-112	201721009534	Generation Of Electricity With The Help Of Condenser Fan Motor Of A Split Air Conditioner	MR. LOHAR GANESH SAYAJI, loharganesh16@gmail.com, 09561351237
CIPCIS 2020: P-113	-	An Automated Mechanism For Effective Cooling Of Solar Panel	Vinayak Deokar, deokarvinay@gmail.com, 9860826083
CIPCIS 2020: P-114	2018210339146	Thermal Comfort Enhancement Of Ceiling Fan (Cooling Mode) Integrated With Peltier Cooler, Heat Pipe, Phase Change Material And Adsorbent. (Air Conditioned Ceiling Fan)	Tamboli Ayub Alamso, Zeal College of Engineering & Research, Sr.No.39,Narhe, Pune -411041
CIPCIS 2020: P-115	201821036606	Clothing Iron Sole Cooler Cum Safety Kit	Tamboli Ayub Alamso, Zeal College of Engineering & Research, Sr.No.39,Narhe, Pune -411041
CIPCIS 2020: P-116	201921028010	Energy Optimized Routing Protocol Using Swarm Intelligence With Mobile Sink In Heterogeneous Wireless Sensor Network	DR. MININATH KASHIRAM NIGHOT, imaheshnighot@gmail.com
CIPCIS 2020: P-117	201921041362	Disk Cleaning And Automatic Disk Cooling Mechanism With Color Coded Wear Measurement Technique In Disk Pads	Vivekanand Naikwadi, naikwadivivek@gmail.com, 9970226802
CIPCIS 2020: P-118	201921013820	System And Method For Speaker Identification Using Geographical Region Language	MR. SANJAY S BADHE, sanjubadhe@gmail.com
CIPCIS 2020: P-119	2019210138114	System For Identification Of Indian Classical Musical Instrument Sounds Using Audio Descriptors	MR. SUSHEN R. GULHANE, sushenrgulhane1@rediffmail.com ¹
CIPCIS 2020: P- 120	202021025428	A method and Composition for purification of textile waste-water by acid doped polyaniline (pani)	SmitaJadhav, jsmita05@gmail.com, Contact 7506033887
CIPCIS 2020: P- 121	201921017076	Economic And Efficient Curing of Column Using Curing Pad	A.B. KUDOLI, anand.kudoli@pccoer.in
CIPCIS 2020: P- 122	202121000493	A Stable Pharmaceutical Composition for Transdermal Drug Delivery	Dr. Avinash Tekade, avitekade@gmail.com, 9371152536
CIPCIS 2020: P- 123	201921052362	Water Bottle With Storage Container	Arti Avinash Tekade, arti.tekade@pccoer.in, 9834720431
CIPCIS 2020: P- 124	201921052215	Multipurpose Hairbelt for Hairstyle	Dipali Dhake, dipali.dhake@pccoer.in, 7588054221
CIPCIS 2020: P- 125	201721007665	A Method for Removal of Dye from Waste Water using Natural Adsorbent	Shraddha Khamparia, shraddha.khamparia@vupune.ac.in, +91-8550973388
CIPCIS 2020: P- 126	48/2020 Dated - 27/11/2020 Page number – 59592	Nanotechnology-Based Drug Delivery Systems and Herbal Medicines	Dr. Sohan S. Chitlange, Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P- 127	IN. 201721007663; WO 2018/158752 US 2020/0002204 The Patent has also been filed in Russia, China and Japan.	Process for Removal and Recovery of Copper-cyanide complex using Microalgae	Yogesh Patil, head_respub@siu.edu.in, Contact: 9970225309



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CIPCIS 2020: P- 128	2018410100021	Dynamic Traffic Detection and Vehicle Classification Using Piezoelectric Sensor	Srivathsan Rengaraj, srivathsan.15me@kct.ac.in, 9442922349
CIPCIS 2020: P- 129	48/2020 Dated – 27/11/2020 Page number – 59591	Identification of New Compounds Aurantiamide Acetate from Phyllanthus Amarus and Peonidine 3-O-Sophoroside -5-O Glucoside from Hibiscus Rosa-Sinensis	Dr. Nagore Dheeraj, Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P-130	201821035557	Enclosure Barrel Casing for Household Broom	Shubham Jagannath Jadhav, Flat No. 604, Devrai Phase-2, Sr. No. 82/P, Near Bapdev Chowk, Kiwale, Tal.- Haveli, Pune – 412101, Maharashtra, India
CIPCIS 2020: P-131	201921003632	Fixed Amount Dispenser for Deformable Tube Packed Semi-solid Material	Sayali Nitin Mane, Flat No. 604, Devrai Phase-2, Sr. No. 82/P, Near Bapdev Chowk, Kiwale, Tal.- Haveli, Pune – 412101, Maharashtra, India
CIPCIS 2020: P-132	201821027872	Helicopter Pilot Flight Training Simulation Mechanism	Pradip Shivaji Mohite, At./Po. – Wangi, Tal. – Kadegaon, Dist. - Sangli, PIN – 415305, Maharashtra, India.
CIPCIS 2020: P-133	201821027873	Cable Operated Pull Down Type Swashplate Assembly with Nylon Fiber Ball for Helicopters	Pradip Shivaji Mohite, At./Po. – Wangi, Tal. – Kadegaon, Dist. - Sangli, PIN – 415305, Maharashtra, India.
CIPCIS 2020: P-134	201821030063	Reversible and Secure Watermarking Using Cryptography on Permuted Digital Media	Dr. Reena Gunjan, MIT, Loni Kalbhor, Rajbaug, Pune, Maharashtra, India
CIPCIS 2020: P-135	201921041362	Disk cleaning and automatic disk cooling mechanism with color coded wear measurement technique in Disk pads	Vivekanand Naikwadi, naikwadivivek@gmail.com, 9970226802
CIPCIS 2020: P-136	201921025313	Innovative steering mechanism in modern vehicles for after parking straight wheel alignment	Vivekanand Naikwadi, naikwadivivek@gmail.com, 9970226802
CIPCIS 2020: P-137	201821041617	Design and development of modified seatbelt mechanism for pregnant women passenger	Vivekanand Naikwadi, naikwadivivek@gmail.com, 9970226802
CIPCIS 2020: P-138	201821020932	Design and Development of Car Seat Constrainer System	Vivekanand Naikwadi, naikwadivivek@gmail.com, 9970226802
CIPCIS 2020: P-139	201621027637	Conveniently Unfolding Of Laptop	Nolesh Premraj Warke, Department of Computer Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-140	201721016767	Switch Module For Efficient Mobile Charging	Arati Tekade, arati.tekade@pccoer.in, 9545452766
CIPCIS 2020: P-141	201621025367	Induction of An Extra Oxygen In The Engine To Reduce Ignition Lag With Increase In Power & Reduction In Air Pollution	Indrajeet Rajendra Khandait, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-142	201621025532	Multi Function Pen Consisting Of Inbuilt Paper, Advanced Punching System, Advanced Stapler, Glue	Shrenik Jain, Department of Mechanical Engg., PCCOER, Ravet, (MS) India



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CIPCIS 2020: P-143	201621025506	A Protective Film for Helmet Visor Which Is Water Repellent And Detachable	Omkar Hanumant Shinde, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-144	201621025537	The Additional Control Unit (ACU) For Automated Speed Control In Required Zones	Abel Mathew, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-145	201621025788	Heart Rate Sensing Helmet for Safer Driving	Shubham Suresh Poojary, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-146	201621026952	Smart Slipper With Weight Sensor, Clock With Stop Watch, Weather Sensor And Bluetooth	Priyanshu Kukkar, Department of E&TEngg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-147	201621026957	Sensor Operated Automatic Ink Stamping Machine	Jayashri V. Chopade, jayashri.chopade@pccoer.in, 9545452766
CIPCIS 2020: P-148	201921047772	A System for Drinking Water Cooler to Reduce Water Wastage and Energy Conservation	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-149	201921047773	A system for Weight Indicator in Seating Arrangement	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P- 150	297724 – 21/09/2017	Gas Flow Measurement Tube	M.Shanmugaprakash, shanmugaprakash.m.bt@kct.ac.in
CIPCIS 2020: P- 151	number – 48/2020 Dated - 27/11/2020 Page number - 59590	Method of Preparation of Nano-Emulsion with its Anti-Aging Action	Dr. Sohan S. Chitlange, Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P- 152	48/2020 Dated – 27/11/2020 Page number – 59586	Methods and Process for the Biodegradable Nanoparticles of Bacopa Extract	Dr. Santosh S Bhujbal, Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P- 153	201841008026	Aluminium Matrix Composite Reinforced with High Strength Tungsten Carbide and Fly ash & Preparation Method Thereof	S. Venkateshwaran, svenkatesh597@gmail.com, 9003836547.
CIPCIS 2020: P- 154	Grant Certificate – 201621013680	Portable-miniature California Bearing ratio cbr) apparatus and Method of using the same thereof	Jnanendra Nath Mandal
CIPCIS 2020: P- 155	Journal No. 47/2019 page no 54835 Dated 22/11/2019	A Novel two components Herbal Microparticulate formulation for Diabetes management	Dr. Santosh S. Bhujbal, Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.
CIPCIS 2020: P- 156	-	A method to predict efficiency of tandem silicon solar cells using Artificial Neural Network (ANN)	Dr. Smita Vishal Katkar, smita6121988@gmail.com, 8805048800



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CIPCIS 2020: P- 157	201921031455	SMA Actuator System for Battery Temperature Control	Kumbhar S. B., rupal.kumbhar@ritindia.edu,9970700772
CIPCIS 2020: P- 158	201921031500	Locking Tongs	Sachin B. Khot, sachin.khot@ritindia.edu, 9764680202
CIPCIS 2020: P- 159	201921052371	A Smart Tool for Testing Deficient Elements in Soil	Vijayalaxmi S. Kumbhar, vijayalaxmi.kumbar@pccoer.in, 8390455493
CIPCIS 2020: P- 160	202021010792	Economical and eco- feasible Method of Slab curing using Curing pad	ANAND BASAVARAJ KUDOLI, Anand.kudoli@pccoer.in
CIPCIS 2020: P- 161	CBR No – 27118, Date: 17/12/2019	An Efficient Vehicle Registration Number Recognition System	Rupali Kawade, rupali.kawade@pccoer.in, 8805011639
CIPCIS 2020: P- 162	-	Automatic Sanitizing System	Sanskriti Sawant, sanskritisawant@gmail.com, 7972576076
CIPCIS 2020: P- 163	CBR No. – 27161 Date: 17/12/2019	Advanced Onion Storage System	Triveni Dhamale ,triveni.dhamale@pccoer.in, 9422009953
CIPCIS 2020: P- 164	CBR No 137, Date 03/01/2020	Dual-Piston Water/Coolant-Injected Self-Cooled Six-Stroke Internal Combustion Engine with Variable Compression Ratio	Deepak Devidas Biradar, ddbiradar@gmail.com, +91 9689901180
CIPCIS 2020: P- 165	222/MUM/2013	Wet Garbage management bag	Mr. Rajendra Vithal Ladkat, contact@rajendraladkat.com Mobile: 9226759450
CIPCIS 2020: P- 166	202021049162	Stabilization of Black cotton soil using Crushed sand and Lime.	Rajshekhkar Gopal Rathod, rajshekhkar.rathod@mituniversity.edu.in, 9901582363
CIPCIS 2020: P- 167	202021007111, International WO2020/141499 A2	Headgear Ophthalmic Device	Arvind Bhallamudi, b.arvind.ravi@gmail.com, +91 9082330830
CIPCIS 2020: P- 168	CBR No. 4063, Date: 26/02/2020	Atomiser Device	Piyush A Dalke, patilpiyush101@gmail.com, +91 99758 89972
CIPCIS 2020: P- 169	Application No: 202021002128	Energy generating Shock absorber shoes	Nayan Madhav Sarode, nayansarode2@gmail.com, 9373063480
CIPCIS 2020: P-170	201921047774	A System for the Measurement and Indication of Weight in Elevators	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-171	201921047775	A System of Vehicle Indicators to Use the Hazard Lights and Direction Indicators Simultaneously	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-172	201921047776	A System for Drinking Water Cooler for the Enhancement of Performance	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-173	201921047777	A System for the Measurement and Indication of Time with Rotating Dial	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-174	201921047778	A System for Tube to Remove the Inside Stored Material	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-175	201921047779	A System for Minimization of Wastage of Soap	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-176	201921047791	A SYSTEM FOR END FINDING AND TAPE CUTTING FOR ADHESIVE CELLO TAPES	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-177	201921047792	A SYSTEM FOR SMOOTH IRONING AS PER FABRIC REQUIREMENTS	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-178	201921047780	A System for cutting zigzag edges on strips	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-179	201921047790	AN INTEGRATED KEYPAD WITH MOUSE FOR COMPUTER	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-180	201921047787	An Altration in Television and Its Remote Control to Make Easy Search of Remote Control	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-181	452/MUM/2015	Refrigerator With Instant Cooling System	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-182	864/MUM/2015	A Time Scale (Indicator) On Writing Pen	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-183	866/MUM/2015	A Two Wheeler Vehicle With Dual Side Stand	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-184	201921047772	A Compact Internal Combustion Engine With Charge Comprising Of Liquid O2 And Fuel	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-185	201921047772	A System For Cooling Using Engine Exhaust Heat	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-186	2918/MUM/2015	Magnet In The Pen Clip For Improved Grip In Pocket	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-187	–	A System For Reduction Of Weight Of School Bag	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-188	–	A Mechanism For Transferring Material In A Multistory Apartment Building	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-189	453/ MUM/ 2015	Adjustable Back Support Of Front Seat In A Car To Give Flexibility Of Forward And Backward Seating	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P- 190	CBR NO. 30951 Date: 11/12/2020	Synthesis, characterization and preliminary biological evaluationof novel isoindoline-1, 3-dione/phthalimide analogues	Sharad Sankhe, sssankhe.chem@gmail.com. +91=9892456103
CIPCIS 2020: P- 191	201741037292	System and method for designing a hybrid Memristor-Cmos Nonvolatile random access memory cell and architecture with Sneak current control	Dr.Saminathan V, nvsami2010@gmail.com, 9943027347



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CIPCIS 2020: P- 192	201721007664, WIPO/PCT. WO 2018/158751, US 2020/0002204 The Patent has also been filed in Russia, China and Japan.	Method of Removal and Recovery of Hexavalent Chromium from Effluents by Passive-Active Biological Process	Yogesh Patil, head_respub@siu.edu.in, Contact: 9970225309
CIPCIS 2020: P- 193	WIPO International Publication Number: WO 2020/008446 A2 International Application Number: PCT/IB2019/059599	A system and Method for Encryption and decryption of text	Hemraj Shobharam Lamkuche, Hemraj.lamkuche@gmail.com
CIPCIS 2020: P- 194	201921023056	Hybrid Compressed Air Drive System	Piyush A. Dalke, patilpiyush101@gmail.com, 9975889972
CIPCIS 2020: P- 195	IN 201821046234 United States of America Patent Office (USPTO) US 16/364,393	Method and a System for detecting an intrusion on a Network	Nisha T N, nisha@scit.edu, 8698762275
CIPCIS 2020: P- 196	Design no 328685- 001, Date 31/03/2020	Quad Bike Differential	Dr. Girish P. Deshmukh, gpdeshmukh@acpce.ac.in, 9768100010
CIPCIS 2020: P- 197	Design No. 285603, Date: 28/07/2016	Design and Development of Multi-size Stapler	Sachin K Patil, sachink.patil@ritindia.edu, 9970700790
CIPCIS 2020: P- 198	-	Abiotic stress in Banana	S.SHARVESH, Sharveshkeerthi3@gmail.com, 8778963214
CIPCIS 2020: P-199	-	A Tooth Brush With Toothpaste Inside	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-200	-	A System For Reduction Of Puncture In Tyres	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-201	-	A White Board Marker Pen For Smooth Writing On Inclined And Vertical Surfaces	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-202	-	A Water Cooling System For Two Wheelers Using Engine Exhaust Heat	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-203	-	A System For Iron And Fabric	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-204	-	Shaving Razor With Shaving Foam Gel Inside The Handle	Harish Umashankar Tiwari, harish.tiwari@pccoepune.org.
CIPCIS 2020: P-205	2605/MUM/2014	Vibration Absorber System For Controlling/ Minimizing Vibrations	S. Bkumbhar, rajarambapu institute of technology ,Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India



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CIPCIS 2020: P-206	265/MUM/2013	Adjustable And Automated Treatment Platform Of Dynamic Back-Bending-Bench For Physiotherapeutic Treatment	DIVEKARDHANAJAY DATTATRAY, Hariprasad, Kalpataru Colony, Survey No. 8/2, Plot No 4, Near New English School, Miraj - 416 410; District: Sangli, Maharashtra State, India
CIPCIS 2020: P-207	3211/MUM/2014	An Apparatus For Heart Blockage Diagnosis	A.B Kakade, BajiNivas, Chahur, Post-Krishna Nagar, Tal.& Dist. Satara, Maharashtra, India, PIN- 415 003
CIPCIS 2020: P-208	3363/MUM/2013	Electronic Geometric Compasses	S.R. JAGTAP, Road No. 7, Krantisinh Nana Patil Nagar, Islampur, Dist: Sangli-415409, Maharashtra, India
CIPCIS 2020: P-209	3364/MUM/2013	Hinge System	A.C. ATTAR, 'Hariyali' Sanmitra Housing Society, At.Po.Kasegaon Tal. Walwa Dist. Sangli, Maharashtra, India, Pin 415404
CIPCIS 2020: P-210	3364/MUM/2013	Hinge System	A.C. ATTAR, 'Hariyali' Sanmitra Housing Society, At.Po.Kasegaon Tal. Walwa Dist. Sangli, Maharashtra, India, Pin 415404
CIPCIS 2020: P-211	3867/MUM/2013	Automatic Agricultural Chemical Sprayer	AWATI JAYASHREE SUDHIR, 'Deccan' Molasis Compound, At Post-Karandwadi, Taluka-Walwa, District-Sangli, Maharashtra 416301
CIPCIS 2020: P-212	4087/MUM/2013	Tracking System For Vehicles With People Flow Management	S.S. Desai, A/P - Madhavanagar (Sugar Factory), Tal-Miraj Dist - Sangli Maharashtra 416416
CIPCIS 2020: P-213	91/MUM/2014	Electronic Baby Cradle	M.S. Patil, Mauli, 1047, Buda Scheme, Sahyadrinagar, Belgaum, Karnataka, India
CIPCIS 2020: P-214	1459/MUM/2015	A Concentrated Solar Pv Thermal Energy System	More Supriya Sagar, A/P - Thanapude, Taluka - Walawa, District - Sangli - 415412, Maharashtra, India
CIPCIS 2020: P-215	IPR APPLICATION / PATENT NO. - 1453/MUM/2015	Automatic Bhel Vending Machine	Anand Kakade
CIPCIS 2020: P-216	3596/MUM/2015	A Cutter Assembly For A Crop Harvester	Salunkhe Sureshroao Anandrao, A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur - 415409, Tal.-Walwa, Dist -Sangli, Maharashtra, India
CIPCIS 2020: P-217	3597/MUM/2015	A Bundling System And Method	Salunkhe Sureshroao Anandrao, A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur - 415409, Tal.-Walwa, Dist -Sangli, Maharashtra, India
CIPCIS 2020: P-218	3498/MUM/2015	A Conveyor System	Salunkhe Sureshroao Anandrao, A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur - 415409, Tal.-Walwa, Dist -Sangli, Maharashtra, India



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CIPCIS 2020: P- 219	-	Control unit of Electric Assisted steering	Ashutosh Jagdale, jagdaleashutosh1998@gmail.com , 8796451664
CIPCIS 2020: P- 220	201721011649	A product for reducing corruption, accidents, traffic on highways also checking the highway rules and reducing the waiting time on toll plaza with the help of digitization in highway administration system	Prashant, prashantg@isqaueit.edu.in
CIPCIS 2020: P- 221	-	A speed control of dc motor using rf Communication	Rameshwar Madne, rameshwarmadne0@gmail.com, 7083493578.
CIPCIS 2020: P- 222	-	Intelligent Bumper & Breaking System	Onkar Divakar Kulkarni, onkar32@gmail.com ,9764963748
CIPCIS 2020: P- 223	-	Traffic Powered Wind Turbines	Mahesh Y. MIttha, maheshmittha806@gmail.com , 8080061417
CIPCIS 2020: P- 224	201721026855	Design and implementation of Nanoscale Dual Gate Stack Silicon on Nothing Junctionless Transistor for improving short channel effect and analog performance	S.C.Wagaj, scwagaj@gmail.com, 9970063553
CIPCIS 2020: P- 225	-	Self-Charging Mechanism for Electric Bike	Mukul Dinesh Kamboj, mukulkamboj25@gmail.com , 8976636354
CIPCIS 2020: P- 226	-	Recovery based Data Sharing by Collaborative Filtering	Pratiksha Shinde, Computer Department ACEM Pune.
CIPCIS 2020: P- 227	-	Image based search engine using deep learning.	Shraddha mane, shraddhamane259@gmail.com,7972562760
CIPCIS 2020: P- 228	-	LPG Refrigeration system with zero operating cost	Akshay N Gavtalkar , akshaytheboss27@gmail.com , 9922903764
CIPCIS 2020: P-229	3599/MUM/2015	Scraping Apparatus	Salunkhe Sureshrao Anandrao, A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur – 415409, Tal.-Walwa, Dist –Sangli, Maharashtra, India
CIPCIS 2020: P-230	4056/MUM/2015	Trimming Mechanism	Salunkhe Sureshrao Anandrao, A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur – 415409, Tal.-Walwa, Dist –Sangli, Maharashtra, India
CIPCIS 2020: P-231	1123/MUM/2011	Improved Sugarcane Harvester And Method Of Using The Same	Salunkhe Sureshrao Anandrao, A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur – 415409, Tal.-Walwa, Dist –Sangli, Maharashtra, India
CIPCIS 2020: P-232	1455/MUM/2015	System And Method For Detection Of Adulterated Milk	A.B.Kakade, At Chahur,Bajinivas, Post- Krishnanagar Taluka&District,Satara- 415003.



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CIPCIS 2020: P-233	4056/MUM/2015	Material Handling System	Salunkhe Suresh Rao Anandrao, Bahe. Works: Plot No.-B-12, M.I.D.C., SALUNKHE, Suresh Rao Anandrao .Islampur — 415409, Tal.-Walwa, Dist — Sangli, Maharashtra, India
CIPCIS 2020: P-234	201621033852	System And Method For Fermentation Of Batter	Dr. Anand Kakade, At Chahur, Baji Nivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India
CIPCIS 2020: P-235	TEMP/E-1/21312/2018	Novel Indile Compounds	A. B. Thomas,
CIPCIS 2020: P-236	201821041712	Method For Preparing Highly Stable Anthocyanin	Santosh Bhujbal, Info.Pharmacy@Dypvp.Edu.In
CIPCIS 2020: P-237	201921045670	A Novel Two Components Herbal Microparticulate Formulation For Diabetes Management	Santosh Bhujbal, Info.Pharmacy@Dypvp.Edu.In
CIPCIS 2020: P-238	TEMP/E-2/2143/2019/MUM	Vapour Shield Insect Repellent Composition And System Thereof	R. V. Badhe, info.Pharmacy@Dypvp.Edu.In
CIPCIS 2020: P-239	TEMP/E-1/21751/2018-MUM	Medicated Skin Regenerative Dusting Powder Hydrogel For Wound Healing	R. V. Badhe, Info.Pharmacy@Dypvp.Edu.In
CIPCIS 2020: P-240	201621027009	Advance Rain Water Utilization Using Digital Control System	Aditya Sudhir Yadav, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-241	201621027008	The System Which Separates Steam And Water From Moist Steam	Indrajeet Rajendra Khandait, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-242	201621027266	Laser Assembly Used For Surveyor's Tripod Centering	Onkar Anandkumar Indlkar, Department of Civil Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-243	—	The Rotatory Jaw Chuck	Jay Nagnath Itkal, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-244	201621029851	Buzzer Indicator System For Headlight On During Daytime	Parimal Shankar Kore, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-245	201621030633	Electric Meter With Smartcard	Chetan Ramesh Ingale, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-246	201621030635	Automated Tyre Puncture Protection And Tyre Cleaning System When Vehical Is Running Simultaneously	Ashish Chandrashekhar Shinde, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-247	201621031258	Automatic Opening Of Laptop Lid Using Toggle Switch	Shreekant Rakesh Shukla, Department of Mechanical Engg., PCCOER, Ravet, (MS) India



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CIPCIS 2020: P-248	201621031258	Electrically Adjustable Mirrors In A Two Wheeler Vehicle Using A Switch	Ronak Paresh Hariya, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P- 249	-	Seat belt assisted Automatic hand break	Muskan Nadaf, nadafmuskan55@gmail.com,9881208712
CIPCIS 2020: P- 250	-	Power Generation Using Foot Step	Nitish Kulkarni, nitish5996@gmail.com, +91 8007367915
CIPCIS 2020: P-251	201621032482	Innovative And Efficient Smart Calculator With Unit-System	KUDOLI ANAND BASAVRAJ, anand.kudoli@pccoer.in
CIPCIS 2020: P-252	201721001280	Fin Based Preheating Of Catalytic Converter	Tejas Kashinath Bodke, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-253	-	An Alteration In Screwdriver To Make It Easy To Grip And Apply More Torque	Suraj Balasaheb Satav, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-254	201721009976	Computer Mouse Containing Fingerprint Sensor For Detecting Password And User Id Of User	Vivek Padmakar Mahajan, Department of First Year Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-255	201721011307	Safety Indicator System For The Personal Protective Equipment (PPE)	Sushmita Sanjay Shinde, Flat No.203 A-wing Gulmohar Garden, Laxmi Park, Kalewadi, Pimpri,, (MS) India
CIPCIS 2020: P-256	201721011569	A Smart Switching System For Electrical Appliances To Prevent The Wastage Of Electricity	Shreyash Sanjay Pimpalshende, Department of Computer Engg. PCCOER, Ravet, (MS) India
CIPCIS 2020: P-257	-	Kilometer Predictor Which Will Sense Fuel In Tank And Predict How Much Kilometer Vehicle Will Travel Further	Rutvij Rajiv Patil, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-258	-	Smart Universal Mobile Charger With Different Current Rating	Shreyash Sanjay Pimpalshende, Department of Computer Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-259	-	Brakes Containing Integrated Circuit (IC), Switch For Switching On Indicator In Moped	Deven Prashant Padale, Department of Mechanical Engg., PCCOER, Ravet, (MS) India
CIPCIS 2020: P-260	201621033974	AUTOMATIC BHEL VENDING MACHINE	Dr. Anand kakade, At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India
CIPCIS 2020: P-261	201621042348	HIGH TRACTION MANUAL TILLER	Dr. Anand kakade, At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India



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CIPCIS 2020: P-262	201621034077	Continuously Variable Length Circular Intake Manifold System	Mr.Thombare Dhananjay Ganpati, Jijai, Shripadnagar, Peth Road, Isiampur,Tal. Walwa,Dist. Sangli, Maharashtra, India, PIN – 515409
CIPCIS 2020: P-263	201721016810	Utensils Washing Glove	Dr. Anand kakade, At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India
CIPCIS 2020: P-264	201721024732	Multiple Sized Stapler	Dr. Anand kakade At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India
CIPCIS 2020: P-265	201721028962	System And Method For Efficient Control Of Room Temperature	Dr. Anand kakade,At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India
CIPCIS 2020: P-266	201821004125	Automatic Sugarcane Plantation Machine	Dr. Anand.B. kakade,At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India
CIPCIS 2020: P-267	201821008931	Multi-Sided Toothbrush	Mr. Attarde Rushikesh, Rajarambapu Institute of Technology, Rajaramnagar, Islampur, Dist. Sangli – 415414
CIPCIS 2020: P-268	201721004160	Switching Polarity Multi-Stable Vibration Energy Harvester	Prof. L.M.JUGULKAR
CIPCIS 2020: P-269	201921031455	SMA Actuator System for Battery temperature Control	Prof.S.B.Patil,
CIPCIS 2020: P-270	201921031500	Locking Tongs	Prof.S.B.Khot
CIPCIS 2020: P-271	270072	A Method And An Optomechanical Scanner For Three Dimensional Focused Laser Beam Spot Scanning In Microstereolithography	Prof. Deshmukh Suhas Pandurang,Smual, Mechanical engineering department, Indian institute of technology, Bombay, Powai, mumbai-400076
CIPCIS 2020: P-272	2573/MUM/2015	A Mounting Structure For Magnets	Mr. Tipole Pralhad, ¹ Flat No.5,S.NO.161/3/3,Suyog Society,Jadhav Nagar,Raykar mala,Dhayari,Pune
CIPCIS 2020: P-273	201621002282	Pyramidal Solar Still	Mr. Virendra Bhojwani, B-7 / 502, Brahma Majestic, NIBM Rd., Kondhwa, Pune
CIPCIS 2020: P-274	201621025659	A Mechanism To Conveniently Release Footrest In Vehicles	Supriya Jomde, ¹ A-2 Wing Flat no 701, Dream City, Sr. No. 46/1, Datta Nagar, Behind Telco Colony, Ambegaon (Bk.), Katraj, Pune
CIPCIS 2020: P-275	201721017826	Automated Oxygenation Device	Suhas Deshmukh Ketan, A-1001, Megh Malhar Raga, S.No. 54,NDA Road, Bavdhan, Pune 411021



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CIPCIS 2020: P-276	201721002404	Blood Warmer	Mr.Suhas Deshmukh, A-1001, Megh Malhar Raga, S. No. 54, NDA Road, Bavdhan,pune
CIPCIS 2020: P-277	201721003774	Machine Health Monitoring System	Mr.Suhas Deshmukh, A-1001, Megh Malhar Raga, S. No. 54, NDA Road, Bavdhan,pune
CIPCIS 2020: P-278	201721034464	Multi DOF Manual Precision Positioning Mechanism With Motion Amplification	Mr.Suhas Deshmukh, A-1001, Megh Malhar Raga, S. No. 54, NDA Road, Bavdhan,pune
CIPCIS 2020: P-279	201621027261	Sensor-Less XYZ Scanner For Precision Application	Mr.Suhas Deshmukh,.info@krishnaandsaurastri.com
CIPCIS 2020: P-280	201821034508	Cutting Dies For Kolhapuri Chappal And Automation Thereof	Ganesh Suresh Jadhav,
CIPCIS 2020: P-281	3053/MUM/2015	Flexure Spring	Mr. Mayur Jadhav, A2-12 Samrat Garden, Behind Vaibhav Theater, Hadapsar, Pune
CIPCIS 2020: P-282	304/MUM/2013	A Drying And Roasting Solar Energy Apparatus And Method Of Using The Same	Prof.S.B.Kumbhar, Near Zp School, A/P Narsinghpur (Tal - Walwa, District - Sangli-415409, Maharashtra State, India
CIPCIS 2020: P-283	2971/MUM/2013	Vibration Massager	Dr. A. P. Kakde, Chahur, Baji Niwas, Post - Krishna Nagar, Taluka & District - Satara, Pin Code 415003, Maharashtra, India.
CIPCIS 2020: P-284	2972/MUM/2013	An Apparatus For Preparing Curd	Prof. Kakade Anandrao Bajirao, Chahur, Baji Niwas, Post - Krishna Nagar, Taluka & District - Satara, Maharashtra Pin Code 415003, Maharashtra,
CIPCIS 2020: P-285	331/MUM/2015A	System For Piracy Detection And Method Therefor	Dr. Chhaya S. Gosavi, chhaya.gosavi@gmail.com, 9850239897
CIPCIS 2020: P-2866	331/MUM/2015A	Innovative System To Improve The Settling Of Sediments In The Water Storage Tank	Gajanan Namdeo Supe, Gajanan.Supe@Pccoer.In,
CIPCIS 2020: P-287	-	SOLID FUEL DIESEL ENGINE WITH INDUCTION OF SOLID FUEL	Ladekar Chandrakishor Laxman, A 401,Saidarshan Apartment,Sector No.29,Bhondve Corner,Ravet Pradhikaran,Ravet Pune Maharashtra India Pin-412101
CIPCIS 2020: P-288	201621030821	Innovative And Efficient Logistic System For Sugar Industries	Anand B. Kudoli, anand.kudoli@pccoer.in,
CIPCIS 2020: P-289	201621032482	Innovative And Efficient Smart Calculator With Unit-System	Anand B. Kudoli, anand.kudoli@pccoer.in,



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CIPCIS 2020: P-290	-	An Alteration In Screwdriver To Make It Easy To Grip And Apply More Torque	Suraj Balasaheb Satav, Arangaon Dumala ,Tal: Shrigonda Dist: Ahmednagar,Pin—413702
CIPCIS 2020: P-291	201821049600	Co-Passenger Weight Sensing Automatic Opening and Closing Foot Rest of Bike	Nilima Baliram Gadge, nilimagadge80@gmail.com, 7558545385
CIPCIS 2020: C- 001	Diary No: 4240/2021-CO/L	Smart hospital (simple medical advisory report through IOT)	Govind Suryawanshi, grsmi18@gmail.com, 9923234201
CIPCIS 2020: C- 002	L-98969/2021	An Intelligent Approach for Prediction of Learning Disabilities in Children	Shailesh Prabhakar Patil, shaileshppatil19@gmail.com
CIPCIS 2020: C- 003	-	A System and Method for analysis of smart meter data	Archana A. Chaudhari, chaudhari.archana12@gmail.com, 8275589285
CIPCIS 2020: C- 004	Diary Number : 6147/2020-CO/L	The Runge kutta 4th order method is used to save first order ordinary differential equations	Sukhadip M Chougule, PIMPRI CHINCHWAD COLLEGE OF ENGINEERING & RESEARCH.
CIPCIS 2020: C- 005	Diary Number:756/2018-CO/L	RF & EMP generation and it's effects	Diary Number:756/2018-CO/L
CIPCIS 2020: C- 006	L-885402020	SOPC based convolution encoding and viterbi decoding	Anuradha Prasad Kulkarni, anuradhak.kulkarni@gmail.com, 9767009703
CIPCIS 2020: C- 007	L-99052/202`1	Smart self Authorized stroller	Monali Chinchamatpure, monalibc@gmail.com, 9922969907
CIPCIS 2020: C- 008	-	Intelligent Automotive Safety of Two-Wheeler Riders	Snehal Patil, sp245974@gmail.com, 7499505355.
CIPCIS 2020: C- 009	-	Effective Disease Prediction and Detection using various Machine Learning Techniques.	Atul Gandhi, atulgandhi770@gmail.com, 8268384064
CIPCIS 2020: C- 010	-	Securely identity based PHR sharing in cloud computing.	Prathamesh Waikar, Department of Computer Engineering,ACEM,Pune



CIPCIS 2020: P- 001

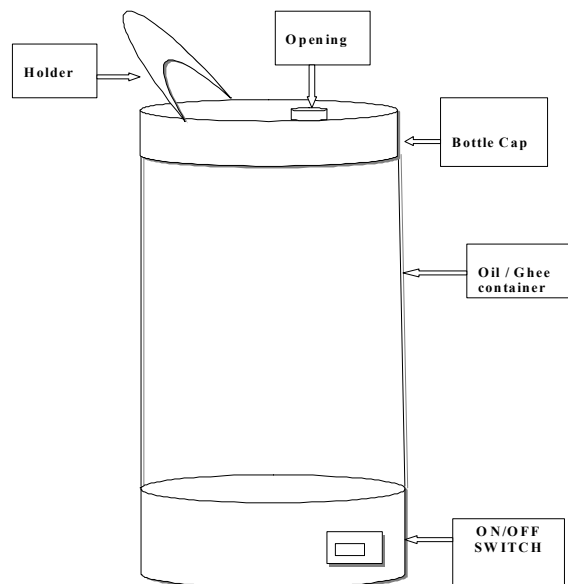
A Pure Coconut Oil Preservation in Winter Season

**Bhagyashree Laxman Gawali¹, V.S.Kumbhar², Snehal Bhagwan Gholap³, Dipali Nilesh Dhake⁴,
Triveni Deepak Dhamale⁵, Rupali Ramdas Kawade⁶, Arti Avinash Tekade⁷.**

Pimpri Chinchwad College of Engineering and Research, Laxminagar, Near S. B. Patil Public School, Ravet, Pune – 412101, Maharashtra,
Indiabhagyashree.gawali@pccoer.in 7219572968

ABSTRACT- There are various options to preserve the coconut oil but it's pure form changes to solid state in winter season usually at present to convert it into liquid state either it is kept in hot water or heat is provided for the same. Instead of going for these options a provision is made in the bottle itself so that the oil liquid state.

DIAGRAM/SCHEMATIC –



1 : Holder, 2 : Opening, 3 : Bottle cap, 4 : Oil / Ghee Container, 5 : ON / OFF Switch.



CIPCIS 2020: P- 002

Method and a System for Detecting an Intrusion on a Network

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²Symbiosis Centre for Information Technology, Symbiosis International (Deemed University), Pune, India, director@scit.edu, 7387101547

ABSTRACT-A system and method for detecting an intrusion on a network is described herein. The system comprises a processor 201 and memory 203. The processor 201 may sniff and analyze a header data of each packet and further create a plurality of network events on the basis of a content of each packet. The processor 201 may identify a pattern of the plurality of network events in the network data flow using a knowledge based finite state machine. The identified pattern is then fed into an Incremental Probability Action Modelling (IPAM) engine to predict a next state in the identified pattern based on a probability of network events. The processor 201 may prepare a probability grid with the probability of the next state as a warning state. The processor 201 may generate, one or more alerts of the intrusion detection on the basis of prediction of the warning state.

DIAGRAM/SCHEMATIC

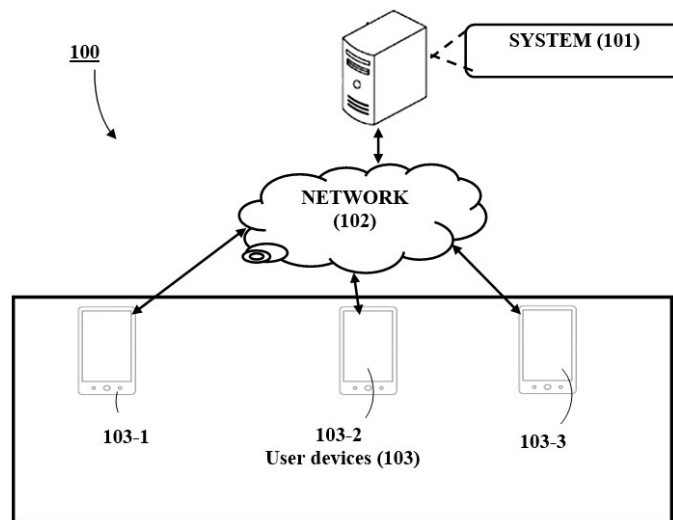


Figure 6

IPR Acknowledgement / Grant Certificate IN 201821046234, US 16/364,393



CIPCIS 2020: P- 003

A Smart Tool for Testing Deficient Elements in Soil

**Vijayalaxmi S. Kumbhar¹, Arti Tekade², Maithili Andhare³, Kajal Mahajan⁴, Samruddhi Jangam⁴,
Dhanashree Divekar⁴**

¹ Asst. Prof. Department of E&TC Engg. PCCOER, Ravet, (MS) India, vijayalaxmi.kumbar@pccoer.in, 8390455493

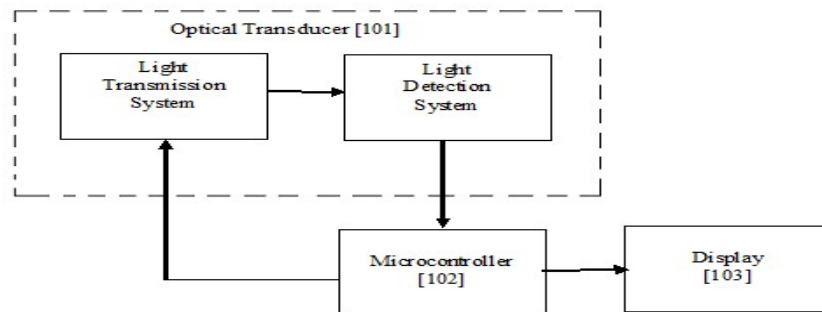
² Asst. Prof. Department of E&TC Engg. PCCOER, Ravet, (MS) India, arti.tekade@pccoer.in, 9860687174

³ Asst. Prof. Department of E&TC Engg. PCCOER, Ravet, (MS) India, maithili.andhare@pccoer.in, 9922435837

⁴ Students, Department of E&TC Engg., PCCOER, Ravet, (MS) India

ABSTRACT- An optical transducer which consists of light detection & light transmission system is developed for measuring and detecting the presence of Nitrogen (N), Phosphorus (P) and Potassium (K) in soil. Such transducer is needed to decide how much extra contents of these nutrients are to be added to the soil to increase soil fertility. The N, P and K value of the sample are determined by absorption of light of each nutrient. The optical transducer which consists of three LEDs as light source and a photodiode as a light detector. The wavelength of LEDs is chosen to fit the absorption band of each nutrient. The nutrient absorbs some of the light from LED and remaining light is reflected by the reflector surface. The photodiode converts the remaining light into voltage. The system uses microcontroller for data acquisition therefore the output from the transducer is converted into a digital display reading. Further these NPK ratios are compared with the data stored in memory and the suitable crops for that soil sample will display.

DIAGRAM/SCHEMATIC –



IPR Acknowledgement / Grant Certificate - 201921052371



CIPCIS 2020: P- 004

Potter's Wheel Rotates By Ratchets Mechanism

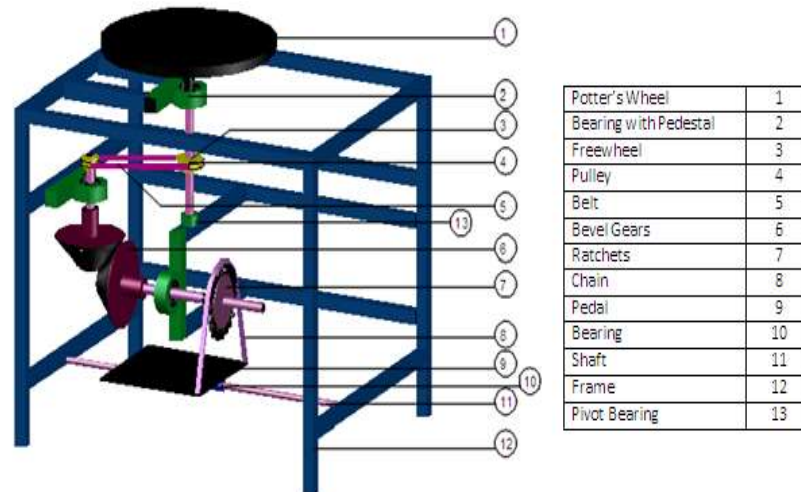
Dr Nandkishor M Sawai¹, Dr Ujwal D Gulhane², Dr Anil R Sahu³

Mechanical Engg. Dept. BDCOE, Sewagram, Wardha, Maharashtra,
nandkishor_sawai@rediffmail.com, 9921194785

ABSTRACT-

The kick potter's wheel mechanism is totally manual and ergonomically poor in design and efficiency, the main problem with kick wheels is they are very expensive and heavy, so this design provides comfortable sitting arrangement for potter at the time of work, human powered by foot pedal, the proposed mechanism is not only ergonomically better but also potter wheel mechanism in chair sitting posture and has a freewheel mechanism for rotating the potter's wheel, the ratchets for giving the input motion for bevel gears, pedal power transfers the energy from human source through the use of a foot pedal, the machine consists of a belt pulley drive mechanism for a rotating of potter's wheel, a foot pedal operating the ratchets vertical rotation into horizontal rotation by using bevel gear, in this machine potter is maintain the speed of potter wheel by foot pedal at the time of making of an earthen pot.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



IPR Acknowledgement / Grant Certificate – Application number 202021041965, dated 28/09/2020. Published in the Indian Patent Office Journal No.: 44/2020 dated 30/10/2020, Page No. 55238.

CIPCIS 2020: P- 005

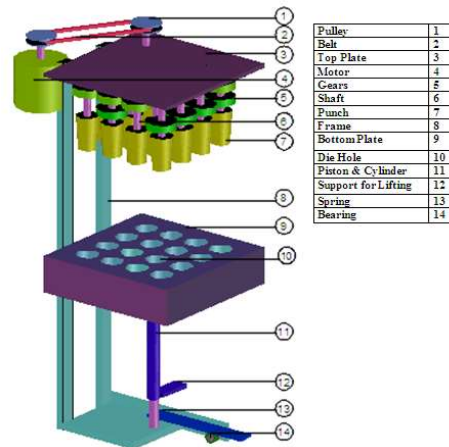
Die Machine For Multiple Earthen Pots (Kullar) In The Pottery Production

Dr Nandkishor M Sawai¹, Dr C C Handa²

Bajaj Nagar, Nagpur, Maharashtra, India
nandkishor_sawai@rediffmail.com, 9921194785

ABSTRACT- The existing die press for forming of earthen pot mechanism is totally manual and poor in design and efficiency, existing die press only single product making machine is use in the pottery industries, this design provides multiple dies are provided for the multiple products in a single stroke in the machine, the proposed die machine is not only ergonomically better but also die machine mechanism working posture and has a gear mechanism with bearing for rotating the punches, the punches is mounted on top plate of the machine and rotates by motor by belt and pulley, the top plate is fixed at the top at the machine frame, the bottom plate is movable in lower of punches and its provided holes for dies, the centre dies holes of the bottom plate are mesh with the centre of the punches, the bottom plate move upwards and downwards direction by using pedal mechanism operates by foot of the human, the dies put in the holes of bottom plate with raw materials and mesh with the rotating punches to form the multiple earthen pots in the singles strokes.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



IPR Acknowledgement / Grant Certificate –Application number 202021011220, dated 16/03/2020, Published in the Indian Patent Office Journal No.: 13/2020 dated 27/03/2020, Page No. 15743.



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CIPCIS 2020: P- 006

Laundry Aggregator System

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²STUDENT, MAHARASTRA, INDIA, owaiskhan7202@gmail.com, 7709296101

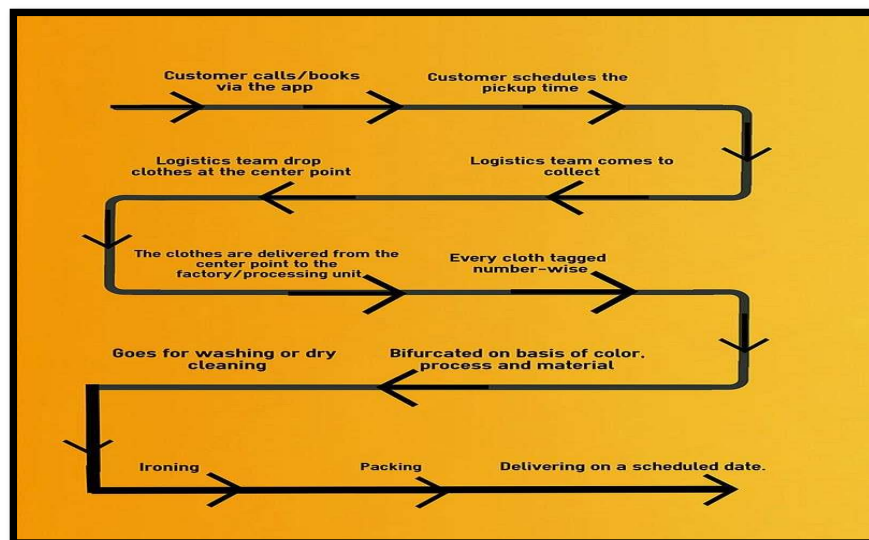
³STUDENT, MAHARASTRA, INDIA, abhijagtap127@gmail.com, 7972355153

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ABSTRACT-In today's scenario your clothes define your personality the way you carry your attire resembles your background. But making these clothes look perfect is the job of launderer. Our prospective is to provide laundry service to the customer as a mediator between them and laundry vendors. This aggregator system would be online service in which customer can easily book their order according to its requirement and our job is to pickup that clothes and drop it to laundry vendor, vendor will clean the clothes according to the customer need. Then delivery guy will return the clothes back to the customer and we will provide cash on delivery (COD) service as well online methods for the payment. Our proposed idea will help in providing and managing the laundry/cleaning services accurately, precisely and in an efficient manner. If we implement our idea as on-demand model then it will reduce all the limitations which is facing by laundry business.

DIAGRAM/SCHEMATIC –



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CIPCIS 2020: P- 007

An Efficient Vehicle Registration Number Recognition System

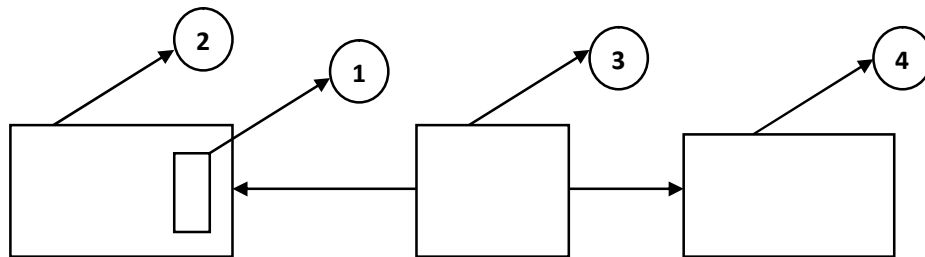
Rupali Kawade¹, Triveni Dhamale², Dipali Dhake³, Bhagyashri Gawali⁴, Snehal Gholap⁵

^{1,2,3}Asst. Prof. Department of E&TC Engg.,PCCOER, Ravet, (MS) India,rupali.kawade@pccoer.in, 8805011639

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ABSTRACT- This invention will now describe in relation to the accompanying drawing in which figure-1 illustrates the QR code placed on vehicle (2). This QR code (1) contains authenticated information of the vehicle owner. In case of emergency or traffic rule violation QR code will be scanned by camera (3). The output of camera is given to processing unit (4) to decode the QR code. This can give us complete information about vehicle owner for further action.

DIAGRAM/SCHEMATIC –



1 : QR Code, 2 : Vehicle, 3 : Camera, 4 : Processing unit

IPR Acknowledgement / Grant Certificate – CBR NO - 27118



CIPCIS 2020: P- 008

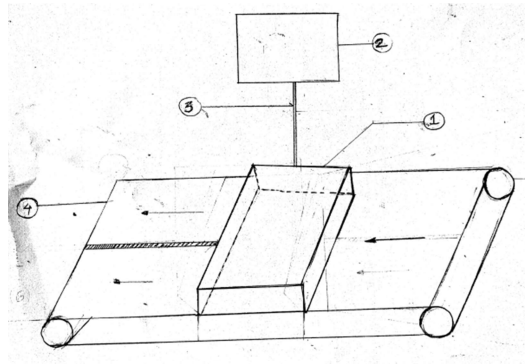
Fault Detection of Industrial Pipes Using Application of Image Processing

**Snehal Atul Aher-Gholap¹, Asmita Desai², Bhagyashree Gawali³, Dipali Dhake⁴,
Rupali Kawade⁵, Triveni Dhamale⁶**

Pimpri Chinchwad College of Engineering & Research Plot B, Survey No. 110 (P), Laxminagar Ravet Pune-412101 India.,
snehalgholap08@gmail.com, 8600268810

ABSTRACT- This innovation is based on automation in quality check procedure in industrial pipe manufacturing unit. It aims to reduce the duration required to evaluate the final product for any defects/faults and separate it from the finished and finalized product. It has multifold benefit to the manufacturing unit that includes reduction in the duration of quality check of the final product, increased accuracy and reduction of human intervention and resources in quality check process thus increasing the overall productivity of the manufacturing unit.

DIAGRAM/SCHEMATIC –



1 : Camera/ Scanner, 2 : PC with MATLAB, 3 : Serial Communication, 4 : Controller, 5 : Motor and Pipe Mechanism with conveyor

IPR Acknowledgement / Grant Certificate – CBR No. 27140



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CIPCIS 2020: P- 009

Design of Low Cost Bulb crushing unit

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ABSTRACT- This Invention addresses the above issues related to the disposal of vehicular bulbs, unscientific disposal of discarded vehicular bulbs happens due to authorized or unauthorized two/four-wheeler garages. These discarded bulbs will collect after several intervals and separate them according to weight, size and shape. after separating will divide them in different groups. The discarded bulbs before using for experiment will must be soaked in water tank for around 15 days by maintain the room temperature in water tank (22°C), to remove excessive dust, dirt on it and also to see any corrosive effect on discarded bulbs and water. The idea of crush mechanism which is develop by using this MS pipe, open at a distance at around 4inches from end alternatively so that if the left-hand opening is at top, at the same time right hand opening at bottom, the purpose of this arrangement is to provide a facilitation to place a collected vehicle bulb into the crushing cylinder. (Or remove the crushed material after crushing is done. A hollow pipe will be attached at both the ends of circular cylinder of which the right-hand pipe is closed ended through which the gases will be collected into the gas collection system. The MS pipe will be attached to the rotating mechanism which will be varying the rotating speed of around 10-15rpm. The metallic balls of diameter around one inch will be placed so that during the revolving cylindrical crushing unit that balls can be revolve and bulbs can be crushed. At the other end of hollow pipe will attach the gas collection container to collect the gases through suction pump, which is release after crushing process. The crush material will collect in movable tray which situated below rotating pipe. The crush material will sieve to separate value added materials. The main advantage of this vehicular lamp crusher device is small area is required for overall setup. Material use for crusher is almost collected from trash so the cost required for setup is minimized. Also, one of the major advantages is wheels are attached to move the overall setup so we can say that overall system is movable. Good quality material is used for setup so that it can work for long life with great efficiency. The setup is installed near the study area at institute itself; area selected for project work is Pune region of Parvati area. Material required for setup is collected from nearby study area. The collected sample of bulbs is first washed off with great care in tank by maintaining the room temperature (22°C), pH of water in tank is check after placing the bulbs in tank and water is found to be acidic.

DIAGRAM / SCHEMATIC –

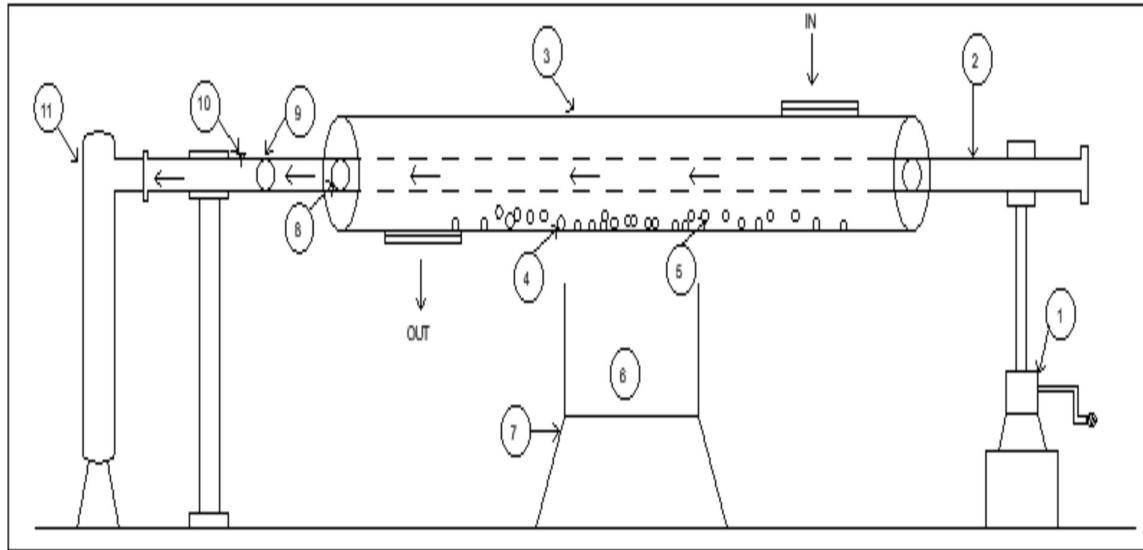


Fig. 01 Schematic of bulb Crushing unit

1. Motor / Revolving mechanism (Electrical / Manual)
2. Perforated Pipe (Hollow)
3. Leak proof crushing drum
4. Metal balls
5. Bulbs
6. Crushed material
7. Movable tray
8. Bearing shaft
9. Suction pump
10. Valve
11. Gas collection cylinder

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CIPCIS 2020: P- 010

Sensor Based Low Cost Soil and Water Monitoring System

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ABSTRACT- Soil sensors can be used to measure the soil temperature, humidity and soil water content in different positions. The soil humidity, representing soil moisture content expressed as relative value, can be computed by the quantity of water per unit mass of the dry solid soil. The soil water content is expressed as the quantity of water per unit mass of the whole wet solid soil. Remote monitoring of soil parameters is an emerging trend which has the potential to transform agricultural practices and increase productivity. pH value, temperature and moisture content of soil are the basic parameters which help in characterizing the soil and therefore in taking proper decisions regarding fertilizer application and choice of crops sown. In this work, antimony electrode is used for pH measurement. For soil moisture content estimation, the inverse relation between soil resistance and soil moisture has been utilized and corresponding circuitry has been developed. The determination of soil temperature is done using the DS18B20 sensor working on the Dallas one wire protocol. The system is integrated with Bluetooth for the transfer of data to a nearby cell phone.

On the other hand monitoring of Turbidity, pH and Temperature of Water makes use of detection sensor with unique advantage. The system can monitor water quality automatically, and it is low cost and does not require people on duty. So the water quality testing using this equipment is more economical, convenient and fast. The system has good flexibility. Only by replacing the corresponding sensors and changing the relevant software programs, this system can be used to monitor other water quality parameters. The operation is simple. The system can be expanded to monitor hydrologic, air pollution, industrial and agricultural production and so on. It has widespread application and extension value. The result obtained using this device will help to find the proper treatment that is to be given to the water sample and make it proper for drinking. By using this embedded device in the environment for monitoring enables self-protection (i.e., smart environment) to the environment. To implement this need to move the sensor devices in the environment for collecting the data and analysis. By deploying sensor devices in the environment, we can bring the environment into real life i.e. it can interact with other objects through the network. Then the collected data and analysis results will be displayed on LCD.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.

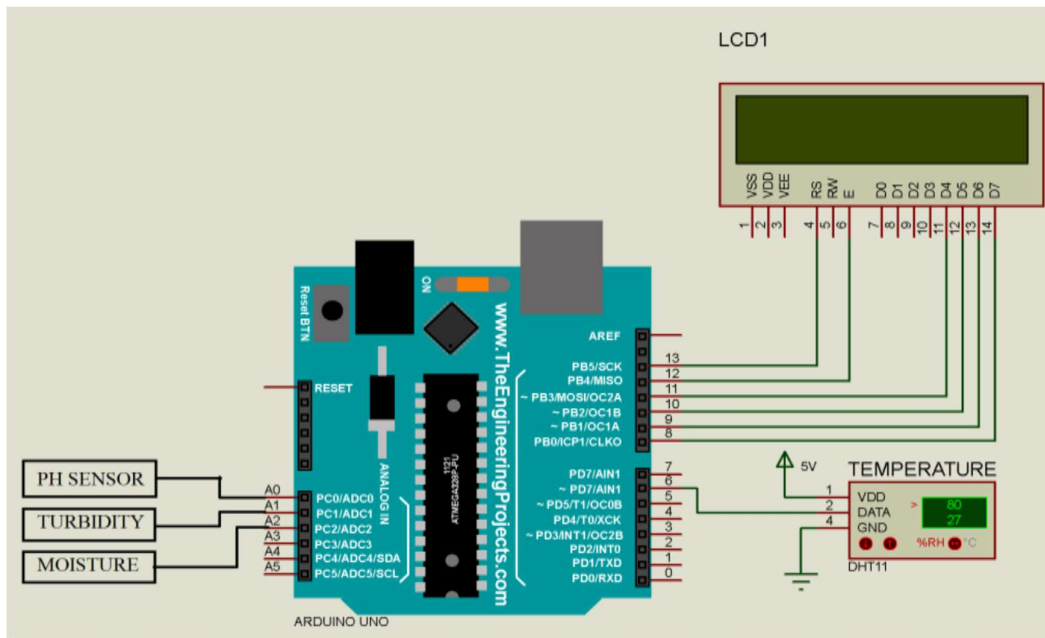


Fig:- 01 Showing Schematic circuit diagram

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CIPCIS 2020: P-011

A Compass Attachment For Drawing Circle

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¹Asst. Prof. Department of Mechanical Engg., PCCOER, Ravet, (MS) India, rahul.bawane@pccoer.in, 8806668536

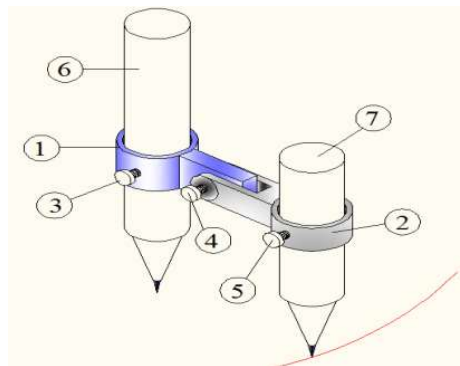
²Asst. Prof. Department of Automobile Engg., NCER, Talegaon Dabhade, (MS) India, nilimagadge80@gmail.com, 7558545385

³Students, Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

According to this invention there is provided an attachment which can replace the use of conventional drawing instrument compass and use to draw an arc and or circle. In this attachment, pivoted type attachment is used whose one end is fixed to any drawing aids like pen or pencil and other end is used to carry pen or pencil to draw an arc or circle, at the time of use of this attachment, one end is kept fixed and other end is used to draw an arc or circle. Thus this attachment eliminates the use of conventional drawing instrument compass. The said system comprises mainly a fixed housing (1) which is fixed and lock to the any writing aids pen (6) with the help of lock screw for fixed housing (3), the another end the pivoted housing (2) which is used to accommodate another writing aids pencil (7), there is a lock screw for attachment (4) which is used to vary the distance to acquired the required distance of the arc. Pencil is fixed into the pivoted housing with the help of lock screw for pivoted housing (5). During drawing an arc, fixed housing (1) attached pen (6) keep at the centre of an arc, and the distance is adjusted with the help of the pivoting the pivoted housing (2) and fix its position with the help of lock screw for attachment (4). Thus using the pencil (7) drawing an arc or circle.

DIAGRAM / SCHEMATIC –



1 : Fixed Housing, 2 : Pivoted Housing, 3 : Lock Screw for Fixed Housing, 4 : Lock Screw for Attachment, 5 : Lock Screw for Pivoted Housing, 6 : Pen, 7 : Pencil

IPR APPLICATION / PATENT NO. – 201821049608



CIPCIS 2020: P-012

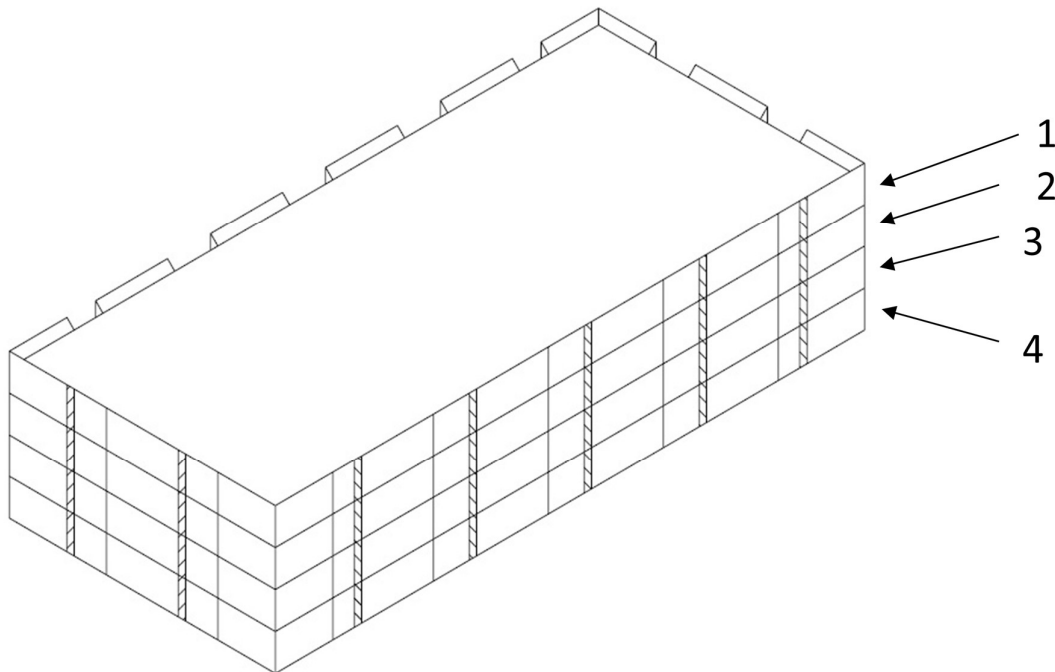
A LAYERED CONFIGURATION FOR A CLEANING DEVICE TO MAKE IT REFILLABLE AND REUSABLE

Sandeep Shripad Borgaonkar¹

¹Asst. Prof. Pimpri Chinchwad College of Engineering and Research, sandeep.borgaonkar@pccoer.in, 9869977531

ABSTRACT- A Blackboard duster consists of a wooden or plastic holding block and a cleaning surface made of cloth or sponge, where, the use of duster again and again, causes wear and tear of the cleaning surface over time, and causes to throw away the duster, hence, the said blackboard duster is configured using said layers, where, each such said layer has two surfaces, a hook surface and a loop surface, and, the loop surface acts as a cleaning surface and the hook surface acts as the attaching surface for attaching the said layer to the top layers, so that, after use, when the said layers becomes so thin, that it cannot be used for cleaning, the said layer can be peeled off and reattached at the back of the remaining layers, thus the said duster can be used multiple times, as also, the said duster can be replaced by a new one, or a refill of a single said layer, depending on the requirement of the user, and, each such said layer is reinforced using said hard plastic elements, which makes the layer hard, and also helps in holding the said duster by the user, where, the said plastic element has a grooved structure so that, the said assembly of said layers fit exactly on top of each other.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921043187

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-013

Extensible Sun Visor to Obstacle Sun Rays from the Centre Portion of the Wind Shield of Vehicle

Nilima Baliram Gadge¹, Rahul Krishnaji Bawane², SharvariRajendra Patil³, Vishakha Vilas Solankure³, KirtiGanpati Patil³, Rutuja Rajesh Paralikar³

¹Asst. Prof. Department of Automobile Engg., NCER, TalegaonDabhade, (MS) India, nilimagadge80@gmail.com, 7558545385

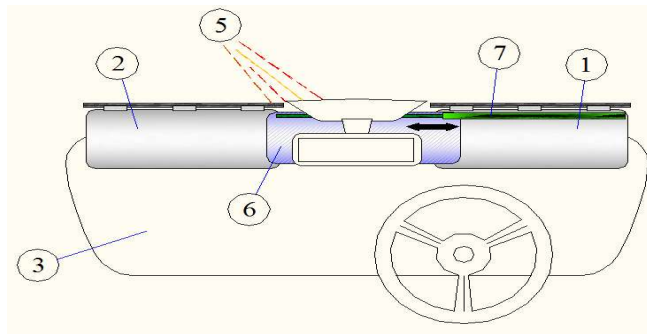
²Asst. Prof. Department of Mechanical Engg., PCCOER, Ravet, (MS) India, rahul.bawane@pccoer.in, 8806668536

³Students, Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

This innovation is based on providing a sliding type extensible sun visor, this sliding sun visor is attached to the driver's sun visor and can slide out to cover the middle open gap portion of the wind shield, and it cover the open gap and obstacle the sun rays to passed through the wind shield and strike on the driver's eyes to avoid disturbance to the driver's site, this sliding sun visor can be wind up by sliding in and bring it to the overlap position and can be hinged with the main sun visor of the driver's side and thus this invention can use to protect driver's eye site from the sun rays passing through the middle portion of the wind shield when ever needed.

DIAGRAM / SCHEMATIC –



1 : LH Sun Visor, 2 : RH Sun Visor, 3 : Wind Shield, 4 : Middle Section Space, 5 : Sun Rays, 6 : Sliding Sun Visor, 7 : Slider

IPR Application / Patent No. – 201821049589



CIPCIS 2020: P-014

Rotating Lock Ring and Fixed Slider Hose Clamp

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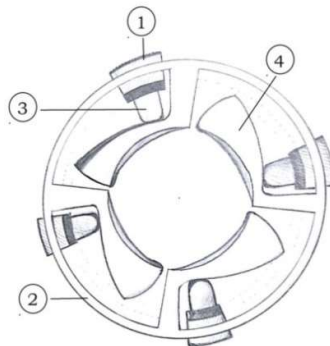
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ABSTRACT-

This innovation is based on providing a mechanical system to provide the locking of the hose clamp, for this the rotating lock ring is rotated along with the inner profile ring whose profile is rested against the slider of the fixed knob, when profile slides over the slider it result in inward movement of profile ring and provide the clamping grip over the hose pipe and when the lock ring rotates clockwise then the pressure on the profile ring released and due to elastic in nature the profile ring restored its unlock position and thus hose clamp released the fitting.

DIAGRAM / SCHEMATIC –



1 : Fixed Knob, 2 : Lock Ring, 3 : Slider, 4 : Profiled Ring

IPR APPLICATION / PATENT NO. – 201821049584



CIPCIS 2020: P-015

Pneumatic Pressure Operated Hose Clamp

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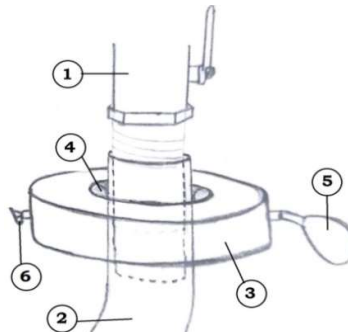
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ABSTRACT-

This innovation is based on providing a even pressure on especially soft and delicate hose pipe by using pneumatic pressure clamp which having a bellows to pump the air into the clamp and this air pressure used to expand the inner flexible lining and provide a firm grip without damaging the hose pipe, also the pressure relief valve used to control and limit the clamping pressure which avoid excess pressure on clamping, thus using pneumatic pressure operated hose clamp one can make a hose fitting easy and quick.

DIAGRAM / SCHEMATIC –



1 : Metal Pipe, 2 : Hose Pipe, 3 : Pneumatic Clamp, 4 : Clamp Inner Lining, 5 : Bellows, 6 : Pressure Relief Valve

IPR APPLICATION / PATENT NO. – 201821049586



CIPCIS 2020: P-016

Offset Drilling Fixture for Drilling Hole on Inclined Surface of Any Object

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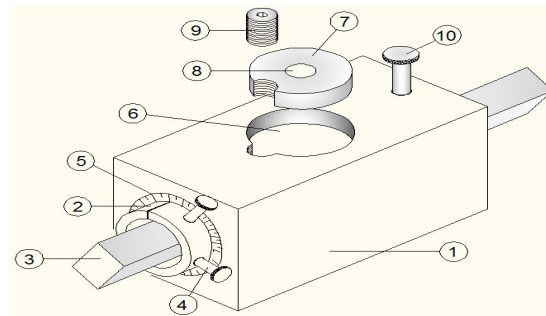
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ABSTRACT-

This innovation is based on providing a fixture with facility of rotating job work to any angular position on calibrated angular scale, without removing the job work, and also this fixture provide a means to guide and support a drill during drilling operation on inclined surface, which eliminate addition work of spot facing required on inclined surface of any object when drill approaching, and at the same time the collate provide a circumferential grip to give more firm and rigid holding of job work without any gripping marks or spoiling surface finish.

DIAGRAM / SCHEMATIC –



1 : Fixture, 2 : Collate, 3 : Job Work, 4 : Job Work Lock Screw, 5 : Angular Calibrated Scale, 6 : Recess For Drill Guide Sleeve, 7 : Drill Guide Sleeve, 8 : Drill Guide, 9 : Grub Screw, 10 : Collate Lock Screw

IPR APPLICATION / PATENT NO. – 201821049572



CIPCIS 2020: P-017

An Alteration in Ruler To Draw Parallel Line

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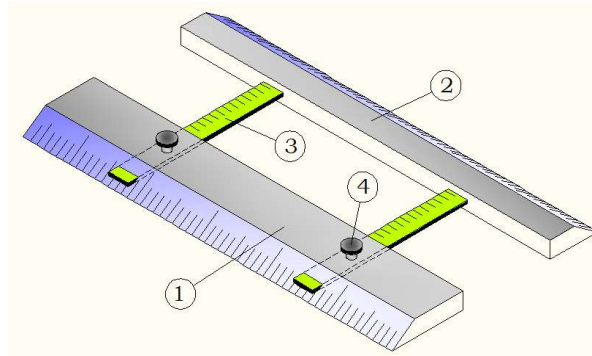
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ABSTRACT-

This innovation is based on providing a extensible parallel line ruler, in which one part of ruler matched with the parental line and the other part is extend out using calibrated extension arm to fix the offset distance, and using lock screw one can lock the offset distance during drawing parallel line using the other part of ruler, thus this innovation in alteration in ruler scale use to draw parallel line without error and get compact to carry easily.

DIAGRAM / SCHEMATIC –



1 : Main Ruler, 2 : Parallel Line Ruler, 3 : Extension Arm, 4 : Lock Screw

IPR APPLICATION / PATENT NO. – 201821049570



CIPCIS 2020: P-018

Generation of Electrical Energy Using Piezoelectric Cell on Bicycle Pedals

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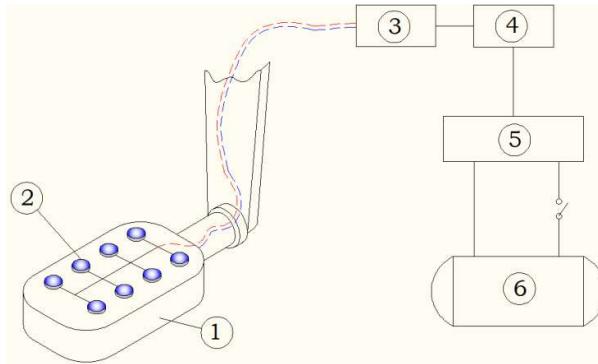
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ABSTRACT-

This innovation is based on providing a piezoelectric cell arrangement on the bicycle pedals so that when a rider applies force on the pedal to propel the bicycle the mechanical stresses applied on the piezoelectric cell generates the piezoelectric energy which then after rectifies and stored in a battery, these stored energy then after may be used for head lamp for illumination, operating radio or charging a mobiles etc., thus using no external power sources electrical / electronic devices can be operated by recovering riders mechanical force energy.

DIAGRAM / SCHEMATIC –



1 : Pedal, 2 : Piezoelectric Cell, 3 : Rectifier, 4 : Voltage Regulator, 5 : Battery, 6 : Electronics Devices

IPR APPLICATION / PATENT NO. – 201821049594



CIPCIS 2020: P-019

Alteration in Paper Punching Machine to Staple Simultaneously

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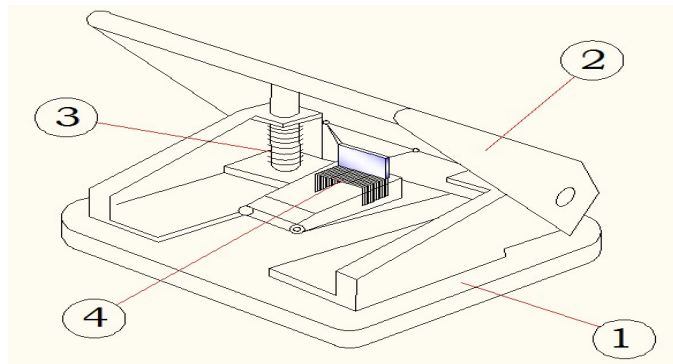
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ABSTRACT-

This innovation is based on providing a simultaneously punching and the stapling operation, in this a common handle is use to operate the punch for producing holes in the paper sheet and at the same time to operate the stapler to pierce the staple pin at the centre of the space between two punch holes, thus using this new and improve punching machine one can simultaneously punch and staple the paper to fastening together.

DIAGRAM / SCHEMATIC –



1 : Punching Machine, 2 : Handle, 3 : Punch, 4 : Stapler

IPR APPLICATION / PATENT NO. – 201821049567

CIPCIS 2020: P-020

Hand Held Stapler With Stapler Lock

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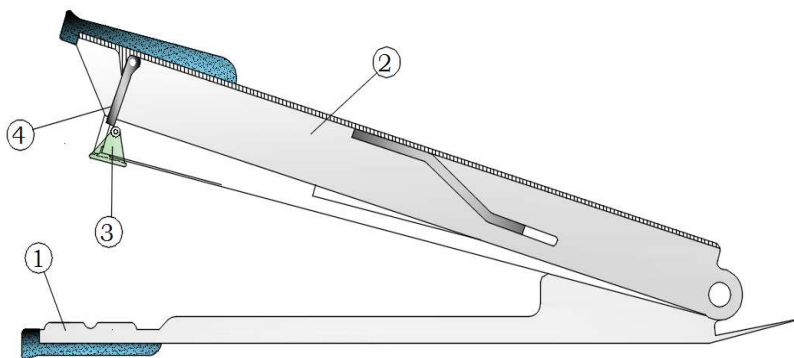
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ABSTRACT-

This invention is based on providing a hinged type stapler lock to the stapler which can be rotated to cover or uncover the stapler pin ejection port, in the regular stapler hammer is always in operative position which may cause ejection of staples pin unknowingly and result in injury, thus to safeguard it, the stapler lock is made hinged so that wherever not in used one can rotate the lock to the position which cover the stapler pin ejection port to block the staple pin from ejection so stapler become inoperative, which does not eject staples pin even if handle is pressed and when needed then stapler lock rotate at hinged to uncover the stapler pin ejection port so now the pressure applied on handle eject the staples pins for stapling the bunch of papers, thus the conventional hand held stapler is modified to make it operative or inoperative as needed to make it more safer when handled.

DIAGRAM / SCHEMATIC –



1 : Anvil, 2 : Handle, 3 : Lock, 4 : Hammer

IPR APPLICATION / PATENT NO. – 201821049606



CIPCIS 2020: P-021

Tire Wear out Warning Visual Indicator

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ABSTRACT-

This innovation is based on providing a color layer in the tire at a certain depth of the tire grooves beyond which if wear is exceed then tire does not provide the sufficient grip on road and get skidded and also there is a power loss because of less in traction, the system only visually indicate the time for replacement of tire when wear is exceed the certain limit, the system may incorporate the different color layer at different depth of tire grooves to show the severity of the tire wear and intern the tire life.

DIAGRAM / SCHEMATIC –



1 : Tire Bead, 2 : Tire Inner Liner, 3 : Tire Tread, 4 : Color layer in Tire, 5 : Tire Belts, 6 : Tire Spies, 7 : Tire Grooves, 8 : Tire Shoulder, 9 : Tire Sidewall, 10 : Tire Body Plies

IPR APPLICATION / PATENT NO. – 201821049603



CIPCIS 2020: P-022

Centrifugal Force Operated Ceiling Fan Blade Cleaning Attachment

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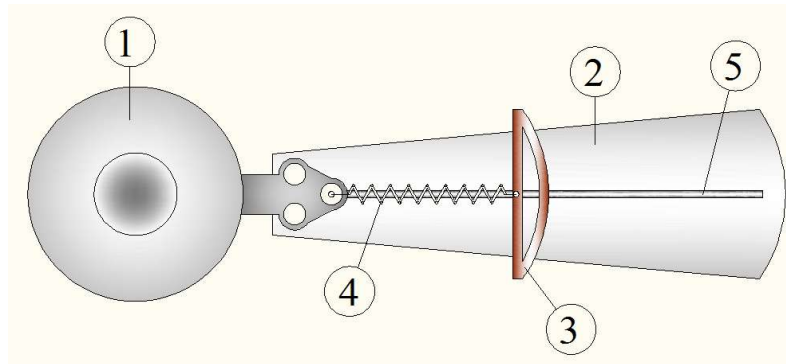
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ABSTRACT-

This innovation is based on providing an attachment for cleaning the ceiling fan blade automatically using the centrifugal force when fan is switch on and off, the attachment slides along the guide ways and during its motion it remove the dust, the slider get position according to the centrifugal force experience and when fan is switch off then retracting spring pull back it and position near the fan rotating hub, thus whenever ceiling fan switch on or off the slider moves along the blade and clean it each time, thus eliminate the accumulation of dust on the fan blade.

DIAGRAM / SCHEMATIC –



1 : Hub, 2 : Blade, 3 : Slider, 4 : Retracting Spring, 5 : Guide Ways

IPR APPLICATION / PATENT NO. – 201821049613



CIPCIS 2020: P-023

Automatic Bike Passing High And Low Beam Signal

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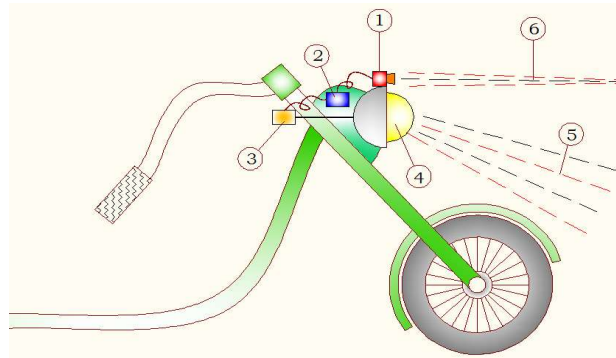
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ABSTRACT-

This innovation is related to provision of a mechanism to make automatic pass signal by shifting high beam to low beam by detecting opposite side vehicle head lamp illumination, in this system a light beam detector senses the opposite side vehicle illumination and accordingly the electronic control unit generate the signal to actuate the shifting mechanism from high beam to low beam automatically to give the pass signal to the opposite side vehicle at night riding, when the vehicle is pass then resume the high beam illumination automatically again, thus the night driving visibility is enhanced and eliminate the human interference to operate the knob of pass signal and high and low beam of bike for better driving experience.

DIAGRAM / SCHEMATIC –



1 : Light Beam Detector, 2 : ECU, 3 : Head Lamp Illumination Control Device, 4 : Head Lamp, 5 : Light Beams,
6 : Opposed Vehicle Light Beams

IPR APPLICATION / PATENT NO. – 201821049611



CIPCIS 2020: P-024

Non-Newtonian Fluid Shoe Cushioning and Shock Absorbing

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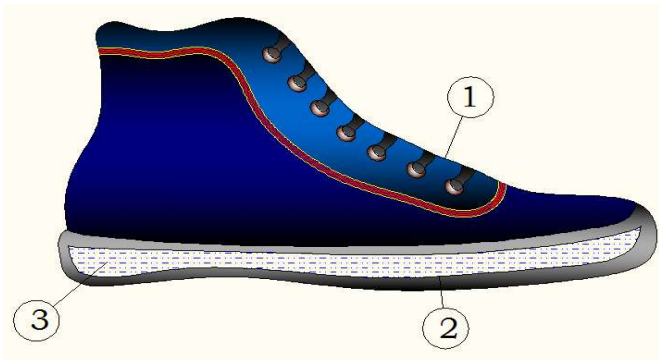
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ABSTRACT-

This invention is based on use of Non-Newtonian fluid in the shoe sole for the cushioning and shock absorption, specially Oobleck, which is a corn flour and water mixture, initially behaves like a liquid or a jelly, however, when gradual force is applied it behaves like a semi-solid material and absorbed shock by displace the fluid to other side in the pocket which enhance the comfort to the foot, but when sudden force is applied then non-Newtonian fluid become more denser and harder than semi-solid and absorbed the shock, thus the shoe with non-Newtonian fluid provides the good shock absorbing as well as enhance the comfort to the foot.

DIAGRAM / SCHEMATIC –



1 : Shoe, 2 : Cushioning Pocket, 3 : Non-Newtonian Fluid, 4 : Fluid Spread Out, 5 : Fluid Denser In

IPR APPLICATION / PATENT NO. – 201821049593



CIPCIS 2020: P-025

Ball Pen On / Off Using Fluid Pressure at Nozzle Body

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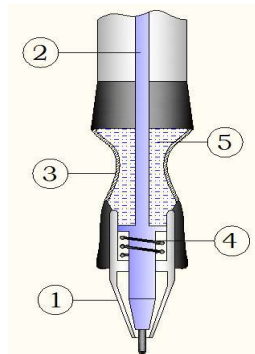
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ABSTRACT-

This innovation is based on a system for on / off ball pen using fluid pressure at nozzle body, said system have flexible grip filled with incompressible fluid thus when it is hold the pressure is applied on the fluid which slide out refill from the pen nozzle against the retracting spring, and when pressure is removed the retracting spring kick back the refill inside the nozzle thus pen if off and thus pen refill tip protected from any damage and flexible grip provide fluid cushioning to finger and the said system thus provided better fluid grip and enhance writing comfort.

DIAGRAM / SCHEMATIC –



1 : Nozzle, 2 : Refill, 3 : Flexible Grip, 4 : Retracting Spring, 5 : Fluid

IPR APPLICATION / PATENT NO. – 201821049556



CIPCIS 2020: P-026

Mechanical Linkage Operated Mudguard Extension for Two Wheeler Motor Vehicle

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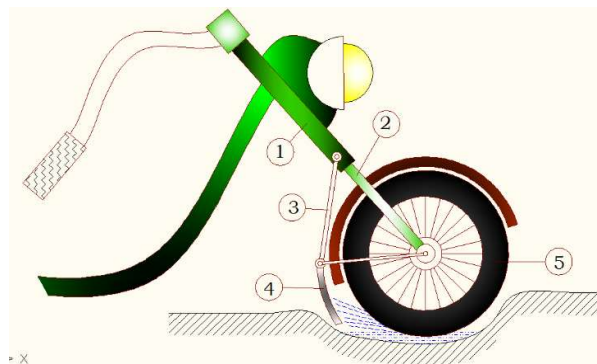
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ABSTRACT-

This invention is based on a system for extensible extraction of guard in addition to convention mudguard to catch the splashes when wheel goes into dig, there is provided a linkage system attached to the extensible guard and its outward movement is depends on the inward movement of telescopic shock absorber, as the wheels pass through any dig, for absorbing shock the telescopic absorber piston rod moves inward, this movement pushes extensible guard outward and extend the length of mudguard and collect splashes from wheel, on normal condition linkages keep this extensible guard behind the main mudguard so that additional drag force is avoided.

DIAGRAM / SCHEMATIC –



1 : Cylindrical Barrel, 2 : Piston Rod, 3 : Linkage, 4 : Extensible Guard, 5 : Tire

IPR APPLICATION / PATENT NO. – 201821049590

CIPCIS 2020: P-027

Pen to Push Out and Pull In Refill Automatically When Griped and Un-Griped Using Fluid Gripper

Rahul Krishnaji Bawane¹, Nilima Baliram Gadge²

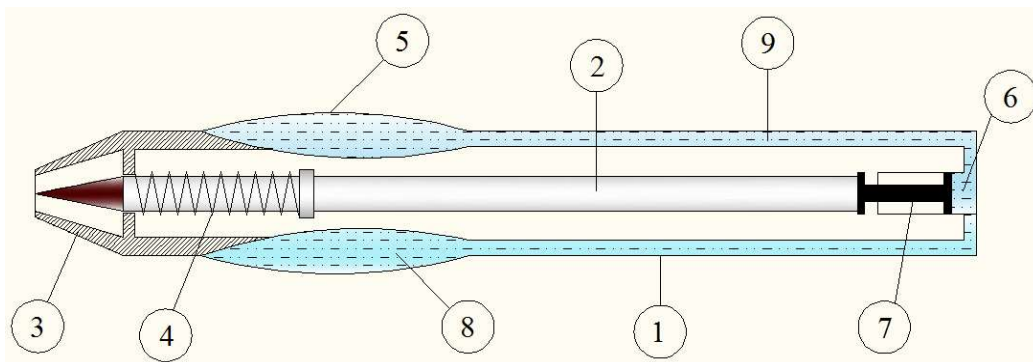
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ABSTRACT-

A system for automatic push out and pull in of refill using fluid pressure when griped and un-griped the pen, and also provide more deeper fluid cushioning to enhance the comfort at grip, the have flexible gripping area filled with incompressible fluid, when it is griped it provide fluid cushioning to finger and also increase the fluid pressure according to grip force, the fluid channel transmitted this increased fluid pressure to plunger arrangement, which push out the plunger, in turn pushes the refill against spring and bring out the tip from pen nozzle, the excess fluid pressure generate back pressure at gripping area which provide better grip and cushioning to enhance writing comfort, when un-gripped, the spring expand and depressurized fluid system and push back plunger and refill, thus pen tip is pull in the nozzle, the said system thus protect pen tip from damage due to fallen down, also provided better fluid grip.

DIAGRAM / SCHEMATIC –



1 : Pen Casing, 2 : Refill, 3 : Pen Nozzle, 4 : Retracting Spring, 5 : Flexible Fluid Gripper, 6 : Plunger Arrangement, 7 : Plunger, 8 : Incompressible Fluid, 9 : Fluid Channel

IPR APPLICATION / PATENT NO. – 201621025803

CIPCIS 2020: P-028

Motorcycle Helmet Having Sliding Chin-Guard with Helmet Locking To Mirror Rod

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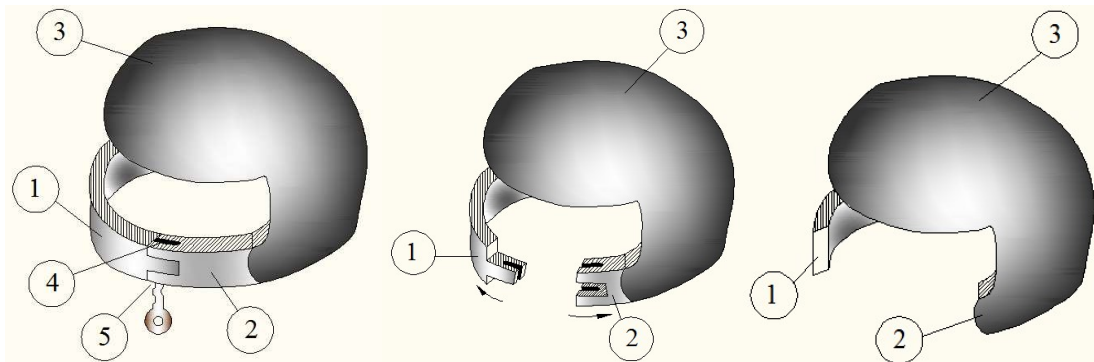
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ABSTRACT-

A helmet provided with a sliding mechanism to the split chin guard, which when slide out from helmet shell, matched and interlocked together, the arrangement make it a full face helmet, and the said mechanism of chin guard is when unlocked then chin guard can slide and push into the helmet shell and the arrangement make it a open face helmet, the matching part of two chin guard having provision of recess to accommodate the mirror rod during interlocking, the locking arrangement with key lock chin guard together with the mirror rod accommodated centrally which secured helmet from being stolen.

DIAGRAM / SCHEMATIC –



1 : Right Side Chin Guard, 2 : Left Side Chin Guard, 3 : Helmet, 4 : Mirror Rod Accommodating Recess, 5 : Key with Interlocking of Chin Guard

IPR APPLICATION / PATENT NO. – 201621026956



CIPCIS 2020: P-029

Pressurized Ink Ball Pen Refill Employing Magnetic Repulsion Force

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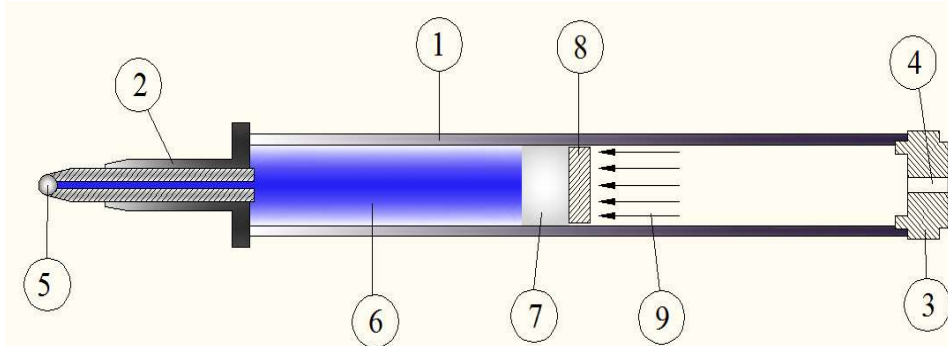
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ABSTRACT-

A ball pen refill casing is a cylindrical barrel which have provision to fix the end cap fixed magnet at rear end and pen nozzle at front end, nozzle can be detaching from refill casing and it accommodating writing tip with roller ball and having internal drilled passage to supply ink to tip roller ball, the pen refill casing accommodating writing ink followed by heavy fluid in it, sliding magnet which rested against heavy fluid maintain continuous pressure on writing ink due to repulsive magnetic forces as end cap fixed magnet and sliding magnet have the similar poles facing each other.

DIAGRAM / SCHEMATIC –



1 : Casing, 2 : Nozzle, 3 : End Cap Fixed Magnet, 4 : Air Vent, 5 : Tip Rolling Ball, 6 : Writing Ink, 7 : Heavy Fluid, 8 : Sliding Magnet, 9 : Repulsive Magnetic Force

IPR APPLICATION / PATENT NO. – 201621029856

CIPCIS 2020: P-030

Vacuum Water Evaporation And Humidification Air Cooling System For Car In Dry & Hot Climate

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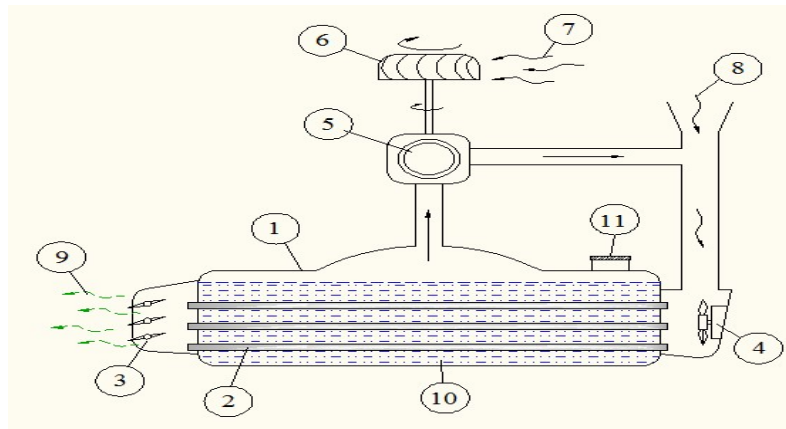
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ABSTRACT-

Air cooler for car which uses energy of wind flow when car is in motion, the cooler is operated on the vacuum water evaporation air cooling system. The evaporation of water is carried out by decreasing pressure in below the water vapor with the help of vacuum pump, it is driven by the wind turbine, the vacuum pump extracted the water vapors are mixed to the incoming air steam thus it get humidified and when the temperature of air is reduced to the level of cooling effect, the said cooled air flow is supplied to car cabin.

DIAGRAM / SCHEMATIC –



1 : Evaporating Vessel, 2 : Copper Tube, 3 : Baffles, 4 : Fan With Motor, 5 : Vacuum Pump, 6 : Wind Turbine, 7 : Wind Flow, 8 : Cooling Air, 9 : Cooled And Humidified Air, 10 : Water, 11 : Water Level Top-Up Cock

IPR APPLICATION / PATENT NO. – 201721009979



CIPCIS 2020: P-031

Alteration In Mobile Charger With Heat Level And Charging Percentage Indicator On The Charger

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ABSTRACT-

A innovative and easily displayable friendly charger consisting of a LED board onto which 2 units are displayed showing battery percentage and heat level of the charger which is programmed onto a IC which is fitted in the charger. This features are given for easy access. The heat level displayed on the LED board, is to prevent charger from overheating and thus will increase the life of the charger. The second specification which is showing the battery percentage of the mobile to prevent it from over charging. The main motive to build this charger is to increase the life of the charger as well as the cell phone or mobile, to make this product, overall positive and success.

CIPCIS 2020: P-032

River Sweeping Arm, (River Cleaning System With Screening, Chlorination & Aeration)

Reshma Rajendra Hasabe¹, Kulkarni Shubham Satish², Vaibhav Parade³, Priyanka Gadekar⁴

C-1102, Nano Spaces, Oppo.To Hanging Bridge Ravet, Pune-412101.

ABSTRACT-

This system is the solution for river pollution, they reduce water purification load on water treatment plant. This system reduces the suspended particles from river. The chlorination process helps to increase the quality of water by killing the bacteria. We mix the chlorine and increase the dissolved oxygen and removing harmful gases from river water by process of aeration.



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CIPCIS 2020: P-033

Gear Pedal Operated Side Stand Retrieving Mechanism

Mr. Sanjay M. Narayankar, Mr. Rohan Pramod Bhavsar, Mr. Nayan Haridas Bayaskar, Mr. Rohan Vijay Mahajan, Mr. Vikram Sakharam Chaudhari

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ABSTRACT-

This invention relates to Side stand retrieving mechanism for motorcycles. An auto retractable type side stand in two wheeler comprises of two holding member depending upon the gear shifting pattern, characterizing TOE side and HEEL side, of the gear shifting pattern of the vehicle and where the input come from the rider who takes the vehicle by engaging the first or any other gear with the help of HEEL or TOE rest through which the force is applied on gear pedal, then due to the mechanism between gear pedal and pivoted holding member, the member get disengaged through the attachment between fixed holding member and pivoted holding member. Thus due to the torque produced by torsion spring which is attach to side stand, side stand get lifted up from its service position (parking position) to retrieved position.

CIPCIS 2020: P-034

Side Stand For Motorcycle

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ABSTRACT-

The present subject matter discloses a system for side stand for motorcycle. The system comprises a movable side stand and an actuator attached to the said side stand. The actuator operates to rotate the side stand between an up position and a down position. The actuator is actuated by a manually operated switch mounted on a handlebar of a motorcycle.



CIPCIS 2020: P-035

System For Automated Monitoring And Controlling Of Unauthorized Settlement In Urban Areas Using Remote Sensing

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ABSTRACT-

A system and method of automated monitoring and controlling of unauthorized settlement in urban areas using remote sensing is presented. The system comprises; input as satellite or Aerial images of targeted urban areas over a time interval; Geographical Information System(GIS) of selected area; the processor such as GPU for image analysis and validation with town planning sanctioned data; the automated hardware system to communicate the municipal commissioner and respective authorities of selected area for further action and controlling.

CIPCIS 2020: P-036

System And Method For Recognizing Musical Instrument Sound Using FRFT Based MFCC Features

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ABSTRACT-

The automatic classification of musical instrument has been built using novel Fractional Fourier transform (FrFT) based MFCC feature. The discriminating capability of the proposed features have been maximized for between-class instruments and minimized for within-class instruments compared to other conventional features. Also, the proposed features show significant improvement in classification accuracy compared to other conventional features. McGill University Master Sample (MUMS) sound database has been used to test the performance of the system. Keywords: MFCC, FrFT, Musical instrument classification, FrFT-based MFCC features.

IPR APPLICATION / PATENT NO. – 201621012767



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CIPCIS 2020: P-037

Energy Efficient Railway Tunnel

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ABSTRACT-

It has been observed that; Railway sector is one of the major electricity consumers in India. In Indian Railway sector, there are more than 50 tunnels having length more than 1 Km. All these tunnels are continuously ON which causes wastage of electricity. In this proposal Energy efficient railway tunnel has been claimed. In this proposed claim, the tunnels will be made ON and OFF as and when required using electronic control and switching circuitry which includes load cell, detector, microcontroller and relay with buzzer driver circuit. In this patent, the detail analysis of Nine Tunnels having length more than 1 Km as well as lamp cost analysis has been presented.

Key words: Load cell, Detector, Switching, Electricity save.

IPR APPLICATION / PATENT NO. –: 201621020163

CIPCIS 2020: P-038

Design And Implementation Of Shielded Channel Double Gate Junction Less Metal Oxide Semiconductor Transistor For Low Power And High Performance

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ABSTRACT-

This invention describes a multi-material double gate junctionless metal oxide semiconductor transistor this device comprises a semiconductor material, which is divided into first (2), second (3) and third (4) portions. The first (2), second (3) and third (4) portions are doped with dopants of the same polarity and the same concentrations. The gate conductor is formed on the gate dielectric and an active area (3) is located in the semiconductor layer under the gate dielectric on both top and bottom side. The source (2) and drain (4) regions and active area have the same conductivity type. The transistor device further comprises an electrode-two (5) which is present on both top and bottom portion of the transistor device and electrode-one (6) is connected to the side of electrode-two (5) of top portion.

CIPCIS2020, February 18-20, 2021



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CIPCIS 2020: P-039

System And Method For Recognition Of Human Emotions

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ABSTRACT-

System and method for recognition of human emotions using Electrocardiogram (ECG) signals are disclosed. Hilbert Huang transform is used to analyze ECG signals to detect emotions. Less number of physiological signals are used to serve the purpose and the recognition rate is also good

CIPCIS 2020: P-039

Design And Development Of Mea For High Peak Power Fast Responding PEM Fuel Cell

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ABSTRACT-

For effective working of any system, the power source should supply power according to load demand. Fuel cell can be used as power source if the load demands constant power. Response of fuel cell to the instantaneously changing load is very less due slow reaction kinetics of the fuel at electrodes. Supercapacitor can be used as power source if load demands large power for short duration. Continuous power for longer durations using Supercapacitor is not possible. For the load like motor load or electrical vehicle load, the load require large power at start, during acceleration and for up hilling, while nearly constant power for continuous operation. Such type of load characteristics cannot be supplied by only fuel cell or only Supercapacitor. In practical cases, to supply such loads, a parallel combination of fuel cell and Supercapacitor or parallel combination of battery and Supercapacitor is used called as Hybrid System. The space required and cost of hybrid system is always more. The present invention proposes design and development of membrane electrode assembly (MEA) for a power source which includes features of both Supercapacitor and PEM fuel as a single power source and therefore it is naval and highly useful for electrification and transportation (Electric Vehicle).

IPR APPLICATION / PATENT NO. – 201621007958

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P- 041

An Analytical Study Of Diesel Engine Emission Evaluation For Acacia Nilotica Seeds (Babul Seeds)Biodiesel

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ABSTRACT-

The smartest technologies continue to deliver benefits to society; this research has aim and attempts to make the Indian farmer as Atmanirbhar by providing not only alternative source of income but also the source of fuel for their water pumps. Majority of the farmer's income is invested in purchase of seeds and cultivation activity. The cultivation needs lifting of water from wells with or without electricity. As we all know the power supply and it's fluctuations in rural parts of Indian Territory. By keeping this in mind and to run these pumps without electric on diesel engine we developed the biofuel from Acacia Nilotica Seeds (Babul Seeds). This research work critically reviews on the properties of Biodiesel, performance, emission of biodiesel and comparative study of Diesel, 5%, 10%, 15%, 20% Babul (Acacia Nilotica) seeds blend. The findings of biodiesel obtained from Acacia Nilotica Seeds (Babul Seeds) can be summarized as -

1. BREAK THERMAL EFFICIENCY

Brake formal efficiency increases as load increases for Diesel and all blends. At maximum load, BTHE has maximum value for Diesel (28.02%) followed by 5% blend (21.56%), 10% blend (20.30%), 15% blend (20.15%), 20% blend (19.46%)

2. HYDRO CARBON EMISSION

Emission of hydrocarbon highly depends upon load. As load increases hydrocarbon emission increases. For maximum load, hydrocarbon emission is minimum for 5% (25%), 10% blend (28%), 15%blend (38),20%blend (113%)

3. CARBON MONOXIDE EMISSION

As load increases carbon monoxide emission also increases. For maximum load it is minimum for 5%blend (0.385%) followed by 10%blend (0.653%), diesel (0.528%),15% blend (0.575%)and 20% blend (1.052%)

4. CARBON DIOXIDE EMISSION

As load increases CO₂ emission also increases. For maximum load it is minimum for 20% blend (2.2) followed by 15%blend (4.62), 10%blend (5.87), 5% (8.02) and diesel (8.42)

5. NITROGEN OXIDE EMISSION

For NO_x as load increases NO_x emission also increases, for maximum load it is minimum for 20% (730ppm) followed by diesel(745ppm) 15%blend (740ppm) 10%blend(1014) and 5%blend (1035ppm) From above it is summarized that as blend per cent increases, CO₂ and NO_x decreases, hydrocarbon increases, but not significant change observed for CO.

$$BTHE = 4.34 + 1.685 \text{ Load} - 0.2849 \text{ Blend}$$

$$HC = -22.22 + 1.580 \text{ Blend} + 3.720 \text{ Load}$$

$$CO = -0.1763 + 0.01412 \text{ Blend} + 0.04671 \text{ Load}$$

$$CO_2 = 2.469 - 0.1347 \text{ Blend} + 0.3530 \text{ Load}$$

$$NO_x = 28.1 + 0.47 \text{ Blend} + 70.57 \text{ Load}$$

From above observations it can be concluded that 10% *Acacia Nilotica Seeds (Babul Seeds)* blend gives better emission quality and not much difference in brake thermal efficiency compared with diesel. Thus it can be concluded that 10% blend gives optimum result so we can replace diesel by 10% of babul blend biodiesel for better emission quality

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



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Fig 1: Showing Three necked flask on magnetic stirrer



Fig 2: Showing Washing of Biodiesel obtained Acacia Nilotica Seeds (Babul Seeds)

IPR Acknowledgement / Grant Certificate –



CIPCIS 2020: P- 042

Detection of pesticides in fruits using IoT- Pestimeter

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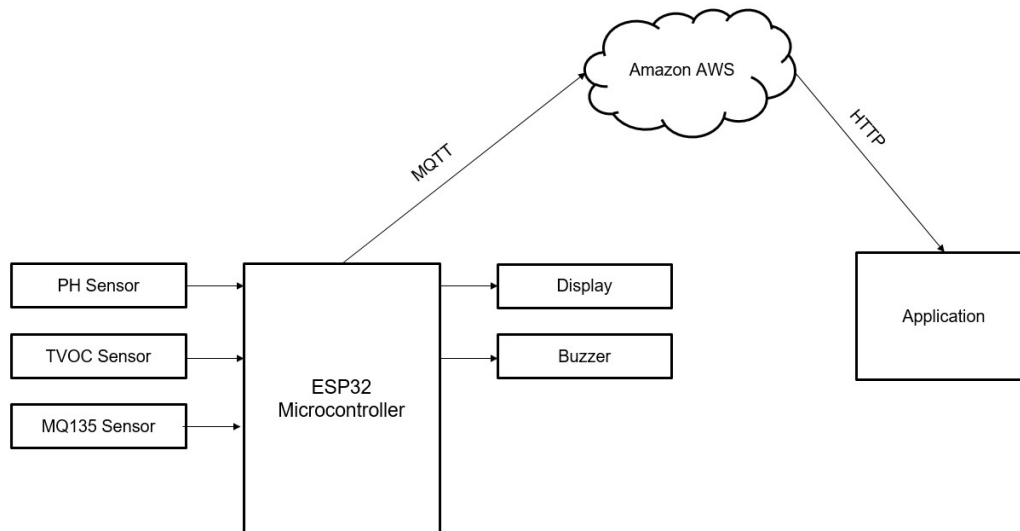
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ABSTRACT- Exceeding level of pesticide contamination in fresh fruits is causing a health risk to people. A technology or equipment is to be developed which is low cost, accurate, reliable and gives results in real-time, to monitor the level of pesticides in fresh fruits available in the market. ESP32 and different sensors are used for sensing the pesticides present in the fruits available in the market. With addition to that, whether the fruit is edible or not will be predicted based on the values displayed on the application as well as a display device, that indicate the presence of pesticides on fruits. Current practices used to detect pesticides are costly and time consuming. With the help of “Pestimeter”, we can get real-time prediction of pesticide presence on fruits. The system will be used for pesticide detection in fruits using above different sensors and then it predicts whether the fruit is edible or not after gathering and processing data from these sensors.

System Architecture–



IPR Acknowledgement / Grant Certificate –



CIPCIS 2020: P- 043

Hot Cold Tiffin Box

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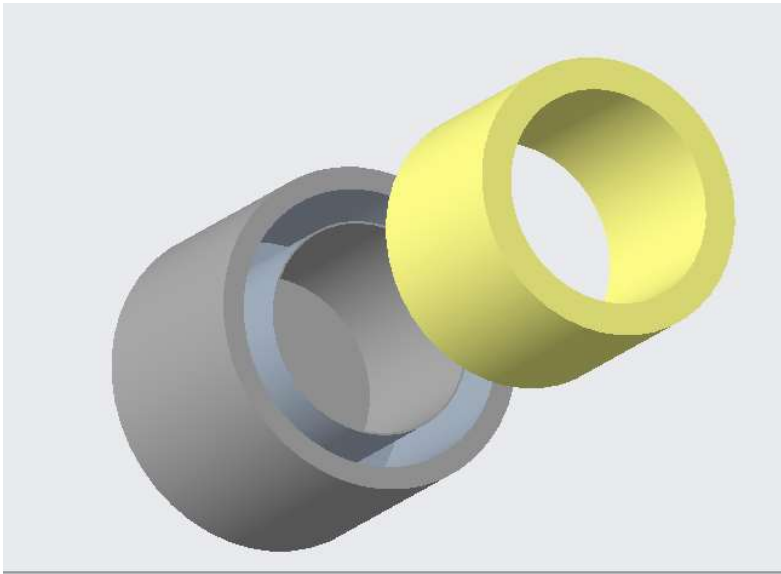
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ABSTRACT-This invention consisting a single system of tiffin box which allows to satisfy both requirements for hot and cold condition. This cold or hot condition of tiffin box can be achieved by replacing the pack of PCM. Shortly, the invention relates to keep the food at any temperature just by changing the PCM pack. This system includes a visible thermochromic material /temperature sensor placed on pack of PCM that will show the colour change which will indicate charged and discharged PCM. Use of PCM for both hot and cold condition in single system will be more economical and effective. To reduce heat losses from PCM to surrounding insulation of optimum thickness is provided.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – CBR NO.- 27234



CIPCIS 2020: P- 044

System for Piracy Detection and Method therefor

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ABSTRACT- The present invention relates generally to techniques for embedding a watermark and more particularly, to a system and a method for piracy detection using video watermarking. Video watermarking refers to embedding a watermark in a video sequence in order to provide protection against an illegal use and to identify manipulations if any. An objective of the present invention is to design a robust, blind, imperceptible digital video watermarking methodology to provide copyright protection in a frequency domain to sustain against geometric, signal processing and collusion attacks and to provide watermarking in a video stream as well as in an audio stream of an input video. The system comprises a generation unit, an embedding unit and an extraction unit. The generation unit is adapted to generate a watermark for an input video. The generation unit comprises an input module, a feature extraction module and an output module. The input module is used for entering the input video into the generation unit. The feature extraction module is adapted for extraction of key frames of the input video. The output module generates the watermark corresponding to the input video. The generated watermark comprises a video signature, a time stamp and copyright information. The embedding unit is operably connected to the generation unit and adapted to embed the generated watermark in the input video. The embedding unit comprises a first splitter, a scene change module, a processing module and a first merge module. The first splitter is adapted to split the input video into a video stream and an audio stream, and the generated watermark into sub watermark images. The scene change module identifies scene change frames of the video stream. The processing module processes the sub watermark images to generate sub shares. The processing module also processes the audio stream to generate a watermarked audio sequence and the video stream to generate a watermarked video sequence. The first merge module is adapted to merge the watermarked audio sequence and the watermarked video sequence to generate a watermarked video. The extraction unit is used by a user to detect an authenticity of the input video. The extraction unit is adapted for extracting the embedded watermark from the input video. The extraction unit comprises a second splitter, a scene change detection module, an extraction module, a second merge module and a compare module. The second splitter divides the input video into the video stream and the audio stream. The scene change detection module identifies scene change frames of the video stream. The extraction module is adapted for extracting information embedded in blocks of scene change frames of the video stream and the audio stream to generate the sub shares. The second merge module is adapted to merge the sub shares to reconstruct the watermark. The compare module compares the reconstructed watermark with an original watermark to know the authenticity of the input video.

DIAGRAM / SCHEMATIC –.

Figure 1 shows a block diagram of a system for piracy detection, in accordance with the present invention; and

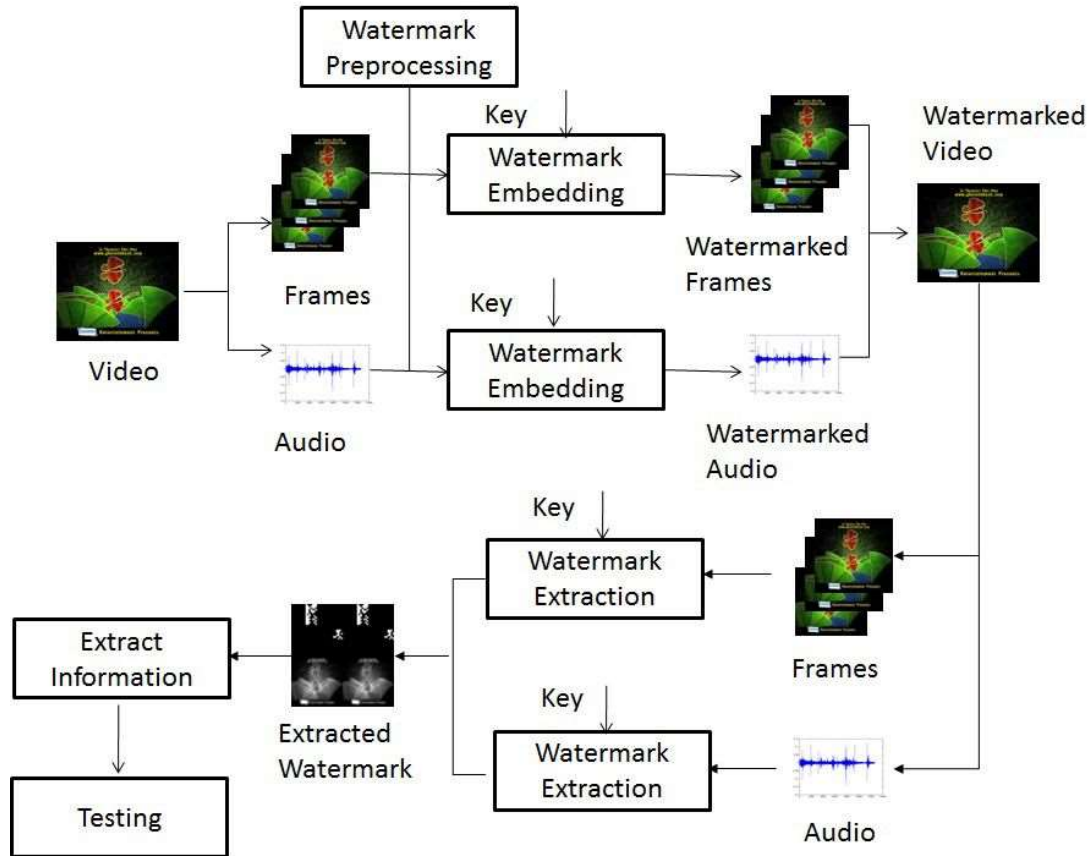


Figure 1

IPR Acknowledgement / Grant Certificate –331/MUM/2015A



CIPCIS 2020: P- 045

Fuel Economy Prediction of Auto Mobiles

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ABSTRACT- Saving fuel is the need of the hour. With this motto we have come up with a display device which will show the rpm at which the vehicle should be driven so that we will get maximum fuel economy (kmpl). The device uses strain gauges from where input is passed on to the microcontroller. The input is processed and the output is passed to the display. Load is the main factor in this issue. As the load increases it reduces the maximum possible economy and also the rpm at which we are able to achieve this economy. The other factors which have a minor effect on the fuel economy are engine condition, effect of air conditioners and electrical appliances, Condition of air filters, quality of fuel and the air pressure inside the tyres. These have a cumulative effect of reduction in economy by 10-25%. We perform an experiment prior to the programming of the microcontroller. In this test we find the maximum economy that can be achieved and the rpm at which it is achieved for a constant load. The test is repeated for different loads. The accuracy is dependent on the difference in the two loads that are taken. After finishing the test, the result table is drawn in which we substitute the values of loads and their corresponding values of maximum economy and the rpm at which we get it. This table is then programmed in the microcontroller with the help of if-else loop. When the load input is received the microcontroller compares it and gives the output of the two loads that are very close to the input value (the one which is higher and other that is smaller). Example: if the reference loads from the test are 1 and 2 kg and the input load is 1.5 kg, the microcontroller will display the readings of both 1 and 2 kg. This output is then given to the LCD display i.e. output. The LCD display shows the load that is acting on the vehicle, the two reference loads that closest to the input load and their respective maximum possible economy and the rpm at which it should be driven in order to get the maximum economy.

CIPCIS 2020: P- 046

Synchronization of Auto Air-Conditioner with Power Windows of Auto Mobiles

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⁴Inventor, Maharashtra, India

ABSTRACT- We have made an attempt to connect the input of Auto Air Conditioner to the power window of the Automobile. This will ensure that when we press the AC button on the Dashboard the windows will get closed automatically as the air conditioner starts to operate. This will help us to save the power that is wasted because of negligence that is offered by the passengers and it also reduces efforts required to close the window while driving. Keeping the windows open during the use of AC will result in more consumption of power as we increase the volume of the region that is to be cooled. This will also reduce human effort which is required to close power window before starting Auto air conditioner. Whereas in existing system control of window and air conditioner switch work separately. So driver requires controlling both, separately and some time and energy is lost in the same.



CIPCIS 2020: P- 047

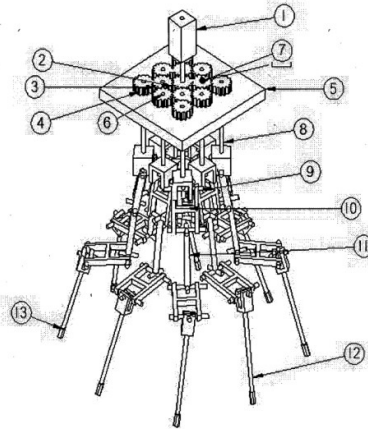
Multiple bolt driver Machine for Different Types of wheels having different Bolts/lugs arrangement

Sandesh Dnyaneshwar Kshirsagar¹,

¹Mechanical design engineer (TATA TECHNOLOGIES LTD), sandeshkshirsagar1997@gmail.com (+91-7741004179)

ABSTRACT- This invention is used for assembling and dismantling of different types of nuts/bolts/lugs of different wheel arrangements having different pitch circle diameters. This invention is useful for wheels having bolts arrangement of (3bolts, 4bolts, 6bolts and 8bolts). This invention uses a gear train which is drive by a bidirectional motor (1) as shown. A gear (2) rotates the gear train due to which output shaft attached to the output gear rotates by means of an idle gear (3) as same direction of bidirectional motor (1) output shaft carries distance adjusting mechanism which can be adjustable in required dimensions. At end adjustable bolt wrench socket (13) removes the wheel bolt/nut/lugs.

DIAGRAM/SCHEMATIC –



1: Bidirectional motor, 2: Gear, 3: Idle gear, 4: Bearings, 5: Gear output shafts, 6: Support Shaft, 7: Gear, 8: Gear output shafts, 9: Universal coupling pin, 10: Universal coupling body, 11: Two universal pins coupled by rod, 12: Bottom universal coupling rod, 13: Bolt wrench socket.

IPR Acknowledgement / Grant Certificate – CBR NO. 21577



CIPCIS 2020: P- 048

Use Of Jatropha Curcas Latex For Development Of Microemulsion

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²Department of Pharmaceutics, Bharati Vidyapeeth College of Pharmacy, Kolhapur, Maharashtra, India, Mail ID: ashok.hajare@bharatividyapeeth.edu, Contact: 9823695030

ABSTRACT-The present invention relates to the development of stable microemulsion to enhance solubility and bioavailability of BCS class II and IV class drugs by using dried latex of *Jatropha curcas* as a surfactant. The formulated microemulsion was thermodynamically stable, biodegradable, and environment friendly with enhanced solubility and bioavailability. Thus, plant-derived surfactants can replace synthetic surfactant as they are used in lower concentrations, with minimum cytotoxic side effects.

DIAGRAM / SCHEMATIC –



Figure 1 *Jatropha curcas* latex and *Jatropha curcas* latex dried powder

IPR Acknowledgement / Grant Certificate – 3699



CIPCIS 2020: P- 049

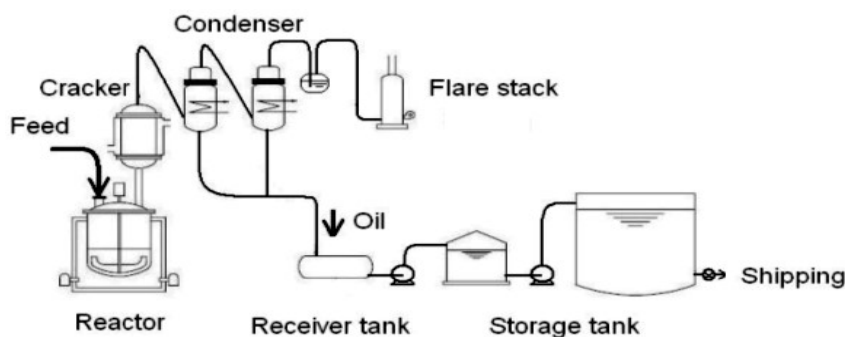
A Transition of Plastic Wastage Into liquefied fuel For Environmental Benefits

Kanchan D. Ganvir¹

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ABSTRACT- Now-a-days plastic pollution is omnipresent throughout the environment all over the world, the biggest problem a man is facing is disposition of plastics which has led to plastic pollution. The intention behind the research is management of plastic wastes and its disposal issues, another main objective of plastic waste management system is safety, and welfare of people and to effectively safeguard the public health. The management of the plastic fraction is one of the most debated issues in the discussion on integrated municipal plastic waste systems. Both material and energy recovery can be performed on such a waste stream, and different separate collection schemes can be implemented. As human's life is becoming more luxurious, the consumption of diesel, commercial fuel and plastics is leading to the "severe energy crisis". Of all the above materials, plastics occupy a great place in causing environmental threats now-a-days it is very much indispensable to use alternative fuel because of energy security, socio-economic reasons and environmental concerns. The aim of the research is to contribute to the debate, based on the analysis of different plastic waste into liquefied fuels. As per the advancement in the technology in science there are various methods of transition of plastic wastes into liquid fuels, One of the best suitable method is the Pyrolysis process of waste plastics into fuel, another advantage of using this method is conserving valuable petroleum resources. It involves catalytic degradation of waste plastic into fuel range hydrocarbon i.e. petrol, diesel and kerosene etc. A catalytic cracking process in which waste plastic were cracked at very high temperature, the resulting gases were condensed to recover liquid fuels. Type of plastics also effect the rate of conversion of into fuel and the results of this process are found to be better than other alternate methods which are used for the disposal of waste plastic which directly reduces pollution in the surrounding. The research article gives the detail study about the process involved in conversion of liquefied fuel. Also in addition it gives benefit to our ecology and environmental balance.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



IPR Acknowledgement / Grant Certificate – L-92824/2020



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CIPCIS 2020: P- 050

Hand Orthosis for finger movement improvement.

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ABSTRACT-The present invention generally relates to a wearable hand orthosis, more particularly it relates to the orthosis for improving hand function in an unilateral spastic hand. Spasticity is a motor disorder characterized by muscle hyperactivity, which produces involuntary contraction of the involved muscles. People suffering from 10 neurological injuries experience spasticity and unusual tightening of the muscles in and around the hand, usually on the weaker side of the body. Left untreated, spasticity can cause a patient's joints and muscles to become so tight that it is impossible to move them, which leads to contracture. But by employing the correct medical treatments, therapists can help prevent contracture in their 15 patients. US patent US20030162634A1 describes a dynamic resting hand splint for the positioning and functional exercise of a neurologically impaired upper extremity, including the wrist, hand and fingers, made up of a forearm support and hand support linked by a first connector. The invention is especially useful for 20 returning the fingers and thumb to an open or extended position after a grasping motion. The hand orthosis available in the market are too expensive and not easily operable by a person with spastic hand. An adjustable orthotic device is disclosed in US5472410A for promoting joint mobility. The device is adjustable both in terms of the force applied to the joint and terms of the direction that the force is 25 applied to the joint. Another US patent US4765320 discloses a low profile splint to support an injured hand and allow movement of the fingers and assist extension of the fingers to overcome stiffness and immobility in the hand. None of the prior art document provides an economic, easy to operate and effective hand orthosis for enhancing pincer grips by allowing controlled movement of individual fingers. Hence, there is a need to provide a device / orthosis that will enhance the hand 5 functioning using simple and cost effective materials.

DIAGRAM / SCHEMATIC



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Applicants: Snehal Joshi, Anagha Ajay Chandrashekhar,

Petkar Rohan Umesh, Patmas Onkar Arun

Application No. :

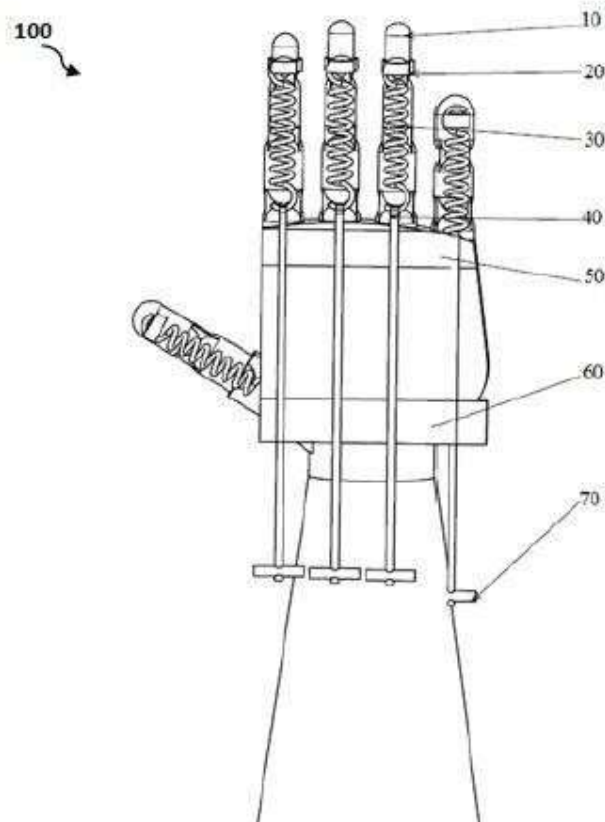


FIGURE 1

IPR Acknowledgement / Grant Certificate –201921000506

CIPCIS 2020: P-051

Fuel Injection Assisted By Recirculation of Exhaust Gas and Dilution of Intake Charge

Nilima Baliram Gadge¹, Rahul Krishnaji Bawane², Jayashri V. Chopade²

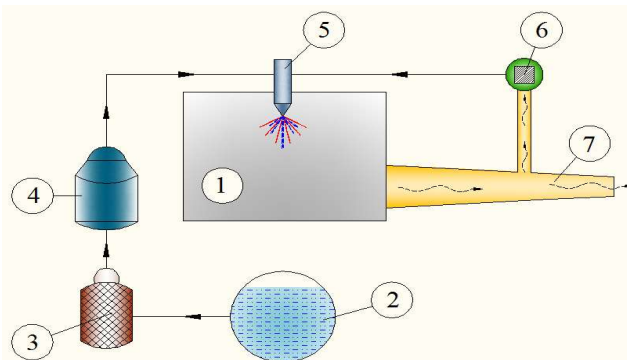
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²Asst. Prof. Department of Mechanical Engg., PCCOER, Ravet, (MS) India.

ABSTRACT-

The exhaust gas assisted injection system, in which a pilot stream of exhaust gas is re-circulate to injector where it mixes with the incoming high pressure fuel, the said system preheat the incoming fuel by heat of exhaust gas and help to improve the spray characteristics, thus the said system reduces the delay period and hence the tendency to knock is reduced, in the system when exhaust gas entered into the combustion chamber with fuel it dilute the intake charge, thus the said system help to reduce the overall temperature of the product of combustion which result in reduction in emission of oxides of nitrogen.

DIAGRAM / SCHEMATIC –



1 : Engine, 2 : Fuel Tank, 3 : Fuel Filter, 4 : Fuel Pump, 5 : Fuel Injector,
6 : Exhaust Gas Recirculation System, 7 : Exhaust Gas Main Stream

IPR APPLICATION / PATENT NO. – 201821012914

CIPCIS 2020: P-052

Production of Plastic Pyro-Oil Using Waste Heat from Automobile Exhaust Gases

Rahul Krishnaji Bawane¹, Nilima Baliram Gadge²

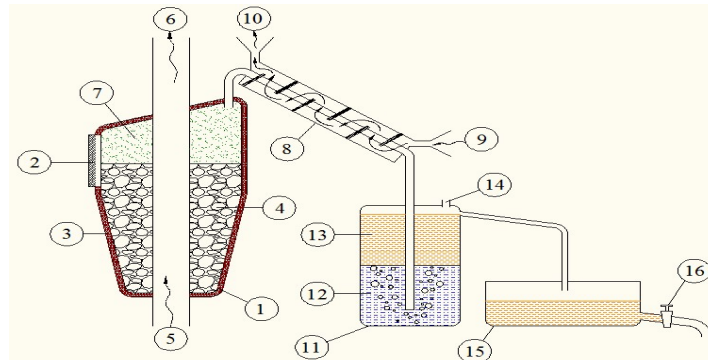
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²Asst. Prof. Department of Automobile Engg., NCER, TalegaonDabhade, (MS) India, nilimagadge80@gmail.com, 7558545385

ABSTRACT-

A biodiesel production setup, which utilized a waste heat of automobile exhaust gases, to produce the biodiesel / alternative fuel form the plastic, this target three issues, viz, reducing thermal emission by heat recovery from exhaust gases, and using plastic for production of pyro-oil it tackle the sever problem of waste plastic management, and at the same time till date any automobile when run it consumed fuel form the fuel tank, and thus needed to top up by new purchase, but this invention, result in production of biodiesel / alternative fuel during the running of vehicle, thus on one side fuel get consumed and on other side other fuel get produced to top up fuel tank to some extent.

DIAGRAM / SCHEMATIC –



1 : Heating Chamber, 2 :Feeding Door, 3 : Thermal Insulation, 4 : Waste Plastic, 5 : Exhaust Gases Inlet,
6 : Exhaust Gases Outlet, 7 : Plastic Fumes, 8 : Condenser, 9 : Cooling Water Inlet, 10 : Cooling Water Outlet,
11 : Water Bath, 12 : Water, 13 : Plastic Pyro-Oil, 14 : Air Vent, 15 : Plastic Pyro-Oil Collector, 16 : Tap

IPR APPLICATION / PATENT NO. – 201821006521

CIPCIS 2020: P-053

Speed Governing By Automatic Braking System for Automobiles

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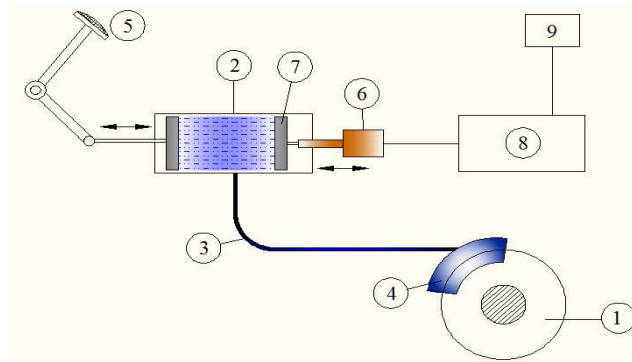
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ABSTRACT-

Speed of automobile vehicle is limited within the maximum safe speed limit using the additional braking system incorporated in the main braking system, thus when vehicle speed is exceed the set limit of maximum safe speed then a sensor receive signal and the data is analyzed by computerized system and accordingly actual the solenoid valve which automatically applied the braking force by building up pressure in brake master cylinder, thus vehicle speed reduces, when speed is bring back to within the maximum safe speed then system de-activated solenoid and de-pressurized the brake system and braking force is removed, within set maximum safe speed the said system remain inactive and it does not interfere any kind of normal braking system.

DIAGRAM / SCHEMATIC –



1 : Brake Drum, 2 : Brake Master Cylinder, 3 : Brake Line, 4 : Brake Shoe Actuator,
5 : Brake Paddle, 6 : Solenoid Valve, 7 : Solenoid Valve Plunger, 8 : ECU, 9 : Speed Sensor

IPR APPLICATION / PATENT NO. – 201721032364



CIPCIS 2020: P-054

Voice Recognized Gear Shifting For Automobile

Nilima Baliram Gadge¹, Rahul Krishnaji Bawane², Sneha V. Pawade², Aniket D. Deshmukh²

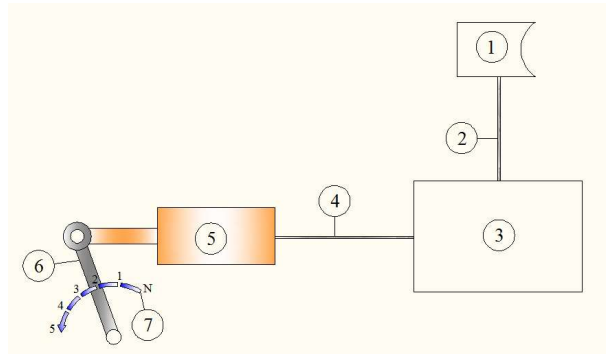
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²Asst. Prof. Department of Mechanical Engg., PCCOER, Ravet, (MS) India.

ABSTRACT-

An apparatus are disclosed for recognizing voice commands for generating control signals once the command is recognized, in accordance with this disclosure the audio signal is converted into a electrical signal, the electrical signal is operate the actuator accordingly and thus actuator operate the gear shifter to respective gear position, thus using voice command the gear and thus speed of vehicle can be changed accordingly, this eliminate any physical involvement and mind diversion in operating the knob / paddle.

DIAGRAM / SCHEMATIC –



1 : Microphone, 2 : Voice Signal, 3 : Voice Recognized System, 4 : Electrical Signal,

5 : Actuator, 6 : Gear Shifter, 7 : Gear Shifting Position

IPR APPLICATION / PATENT NO. – 201721038390



CIPCIS 2020: P-055

Standby Single Cylinder Engine Drive System for Car

Nilima Baliram Gadge¹, Rahul Krishnaji Bawane², Jayesh V. Bute², Jayashri V. Chopade²

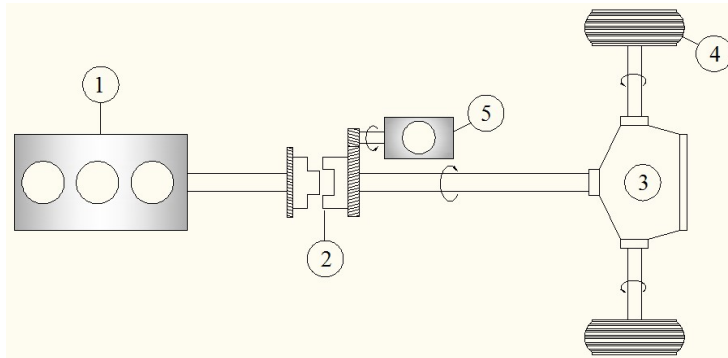
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ABSTRACT-

The main internal combustion engine when fails and no source of repairing it nearby, then needed to push the vehicle or toe it to service station which is physically exhausting and time consuming activity, this is addressed by using a single cylinder standby internal combustion engine which remain idle during normal working and come to play if main engine fails, it is run to produce a power, which provide the torque to drive a vehicle to nearby service station without any physical exertion or toe service.

DIAGRAM / SCHEMATIC –



1 : Main Engine, 2 : Gear Box, 3 : Differential, 4 : Wheel,

5 : Single Cylinder Standby Engine

IPR APPLICATION / PATENT NO. – 201721040061



CIPCIS 2020: P-056

Fuel Heating Before Injector Using Exhaust Gas for Diesel Engine

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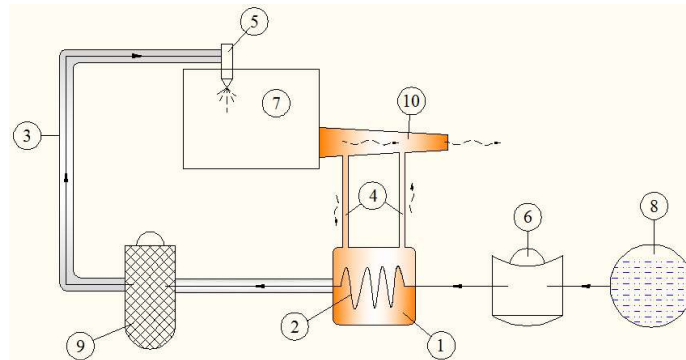
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ABSTRACT-

A system for preheating diesel fuel before being introduced into a combustion chamber of an internal combustion engine, particularly during passing of the fuel through a fuel line, the system includes a heating chamber and a hot exhaust gas system, where the heat is exchanged from hot exhaust gases to diesel fuel through a coil type tube in heating chamber. This preheated diesel fuel improve the spray quality and combustion characteristic and minimizes the residual emitted to atmosphere and clogging of fuel filter in cold weather.

DIAGRAM / SCHEMATIC –



1 : Heating Chamber, 2 : Coil Type Fuel Line, 3 : Thermal Insulation, 4 : Exhaust Gas System,
5 : Fuel Injector, 6 : Fuel Pump, 7 : Engine

IPR APPLICATION / PATENT NO. – 201721032362



CIPCIS 2020: P-057

Automatic Mobile Flight Mode System For Vehicle Driver

Nilima Baliram Gadge¹, Jagdish Jain Palve², Ganesh Balu Jawalkar², Sunil Sahadu Yewale²

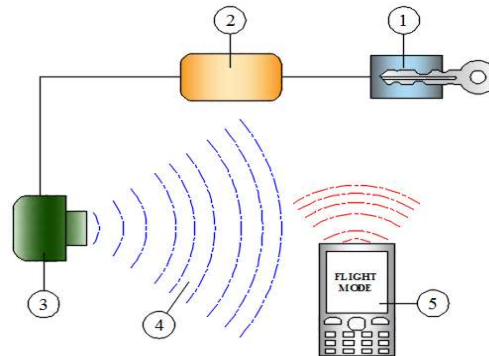
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²Department of Mechanical Engg., PCCOER, Ravet, (MS) India.

ABSTRACT-

This innovation is based on automatic shift over to flight mode whenever ignition switch is ON to drive a vehicle by using the control unit and wireless signal transmitter, these signal catches by mobile and according to programmed it automatically shift to flight mode, and when the ignition switch is OFF the respective signals are send to mobile and it shift back to its original mode, thus during driving mobile shift over to flight mode to avoid call during driving which result in reduction in road accidents.

DIAGRAM / SCHEMATIC –



1 : Ignition Switch, 2 : Control Unit, 3 : Transmitter, 4 : Wireless Signal, 5 : Mobile

IPR APPLICATION / PATENT NO. – 201821023309



CIPCIS 2020: P-058

Non-Newtonian Fluid Mobile Casing Absorbing Impact Shock and Providing Fluid Cushioning Grip

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Ganesh N. Garade², Sandeep H Mhaske², Sunil S Yewale², Jitendra N Nawale²**

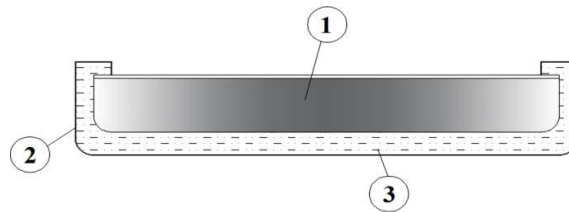
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²Department of Mechanical Engg., PCCOER, Ravet, (MS) India.

ABSTRACT-

When mobiles fallen down due to impact its cases broken and or damages. Also all types of cases many made for protecting mobiles from scratches but unable to absorb the impact shock, this invention is based on use of Non-Newtonian fluid in mobile cases, specially Oobleck, which is a cornflour and water mixture, initially behaves like a liquid or a jelly, however, when force is applied it behaves like a solid for a short time, thus mobile will protected from any shock impact, if force is slowly applied then it like a liquid or jelly which provide a cushioning fluid grip.

DIAGRAM / SCHEMATIC –



1 : Mobile Handset, 2 : Flexible Cover Case, 3 : Non-Newtonian Fluid

IPR APPLICATION / PATENT NO. – 201721025740



CIPCIS 2020: P-059

5-Cylinder Two-Stroke Radial Turbo-Charged Gasoline Engine for Helicopter and the Like

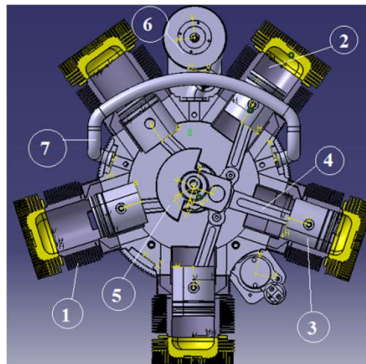
Pradip Shivaji Mohite¹, Sandeep Raghunathrao Mohitepatil¹

¹At. Post – Wangi, Tal. - Kadegaon, Dist. - Sangli, – 415305, Maharashtra, India

ABSTRACT-

This innovation is based on providing a light weight 5-cylinder two stroke gasoline radial engine for the helicopter and the like applications, the said engine consist of a master connecting rod whose big end is modified to accommodate other four connecting rod, where the power to weight ratio is enhanced by providing turbo-charging to the gasoline engine, which is positive displacement pump which draws charge (mixture of gasoline and air) from carburetor and supplies at higher density to the engine cylinder through crankcase, the said radial gasoline engine in pair is provided which are use to propel the helicopter and lift and fly, there are provision such as on failure of any one other will take care of the helicopter flight.

DIAGRAM / SCHEMATIC –



1 : Cylinder Block, 2 : Cylinder, 3 : Piston, 4 : Master Connecting Rod, 5 : Crankshaft, 6 : Turbo-Charger,
7 : Charge Inlet, 8 : Cooling Fan

IPR APPLICATION / PATENT NO. – 201921038631



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-060

Advance Speed Control System Using Wireless Communication

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ABSTRACT-

Advance Speed Control System using Wireless Communication is described. The system comprises a Hardware system for Speed Control and Mobile App. A Hardware system for Speed Control comprises GPS, Microcontroller, GSM, Buzzer, and Speed Violation Indicator. If driving speed is greater than threshold value, Microcontroller sends signal to ring buzzer and to turn on speed violation indicator. After receiving speed violation alert, driver can slow down the driving speed. If driving speed is greater than threshold value, processor also sends message containing information such as driving speed and location to registered mobile number using GSM. Using Mobile App the user can store mobile number and speed threshold value in memory associated with Microcontroller. Using Mobile App, the owner of the vehicle can also track the location of the vehicle.

IPR APPLICATION / PATENT NO.- 201621017763

CIPCIS 2020: P-061

System And Method For Predicting Heart Disease Risk Factors

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ABSTRACT-

System and method for predicting heart disease risk factors based on handwriting analysis is disclosed. The writing features such as horizontal lines, vertical lines, left slant, right slant, total length of horizontal baselines, total length of vertical baselines, total number of left slant lines, total number of right slant lines, size, pen pressure etc are used to predict the presence of heart disease risk factors and the type of the heart disease risk factors. The system is easy to use, cost effective and user friendly. The recognition rate is also good.



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-062

System And Method For Predicting Human Emotional State

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ABSTRACT-

System and method for predicting emotional state based on handwritten text is disclosed. The writing features such as letter size, letter slant, top margin, bottom margin, left margin, right margin, spacing between the words and lines, baseline, pressure etc are used to predict the 'emotional state of the writer. The system is cost effective, and user friendly. The recognition rate is also good.

IPR APPLICATION / PATENT NO. – 20172023790

CIPCIS 2020: P-063

Driver Aligned Seat Belt Position Sensor To Avoid False Use Of Seat Belt Safety System

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ABSTRACT-

A system for proper use of seatbelt safety system, the said system uses a seatbelt with heartbeat sensor/strain gauge, the said arrangement enables driver to wear the seatbelt from backside to avoid uncomfortable feeling or due to laziness by using heartbeat sensor with seatbelt which sense the heartbeats of driver and continuous warning alarm is given by locking sensor till driver locks seatbelt from front side, modification over conventional seatbelt system which unable to locate proper position of seatbelt, sensing position of seatbelt with respect to driver, over the chest of driver, ensure proper locking of seatbelt, avoid improper use of seatbelt, ensures safety of driver and occupants and minimizes the possibilities of body damage during accidents, helpful to avoid violation of Traffic Rules.

IPR APPLICATION / PATENT NO.– 2186/MUM/2015

CIPCIS2020, February 18-20, 2021



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CIPCIS 2020: P-064

An Auto-Adjustable Headlamp Of The Vehicle For Safety purpose

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ABSTRACT-

When we are driving the car in the night time, headlamps can be one of the reasons for the major accidents happening in the night time. While driving if there's any vehicle coming from opposite side; sometimes there is divider between two way road and sometimes not. It is expected that both the drivers should shift their headlamps to the low beam for avoiding the problem of non-visibility of the road for certain time due to glare coming from the opposite light. But possible reasons for not keeping the headlamps on the low beams can be avoiding to move the lever time to time from high beam to low beam due to laziness and most of the times on low beam, left side of the roads are literally not visible (according to Indian driving conditions). If there is any pot holes pits or valleys on left side, we have to slow down the speed of the car so most of the drivers don't follow the rules which can lead to major accidents. In my concept I am developing the system in which only the right headlamp shifts to the low beam automatically and only if there is any possibility of the car coming from opposite side so that the visibility of left side is maintained and fatigue of the driver is also eliminated or reduced. According to the concept first of all the headlamps will originally on the high beam position and then the ultrasonic sensor will sense the obstruction which in our case is divider between roads. So if there is any divider both the headlamps will remain on high beam but if there's not, system will shift only right headlamp on low beam hence the problem will be solved."

IPR APPLICATION / PATENT NO. – 158/MUM/2015

CIPCIS 2020: P-065

Effective Attendance Monitoring Using Smart-Phone

Pankaj Ganesh Anjankar, Dr.Harish Umashankar Tiwari

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ABSTRACT-

A system is invented for effective attendance monitoring, the said system uses a mobile phone for monitoring attendance in a classroom, in the said system biometric scanner application is used for attendance recording, the said system has an inbuilt feature to scan the fingerprint of individual student and his attendance is monitored, the said system minimizes time of attendance and error less attendance is taken without proxy attendance, the said system this feature requires only one smart phone is to monitor the attendance, the said system saves stationary and avoid paperwork.

IPR APPLICATION / PATENT NO. – 4718/MUM/2015

CIPCIS2020, February 18-20, 2021



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-066

Optimization Of Overhead Conveyers For Noise, Vibration Reduction & Stable Operation

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ABSTRACT-

An overhead conveyer system for noise, vibration reduction & stable operation comprising: - A conveyer system which is a common piece of mechanical handling equipment that moves, transport products, pieces or parts from one location to another, the said system is especially useful in applications involving the transportation of heavy or bulky loads and odd shaped items to suitable location, it allow quick and efficient transportation for a wide variety of materials, which make them very popular in the material handling and packaging industries. Conveyor systems are used widespread across a range of industries due to the numerous benefits they provide in material handling. - As conveyor systems are commonly used in many industries, including the automotive, agricultural, computer, electronic, food processing, aerospace, pharmaceutical, chemical, bottling and canning, print finishing and packaging, safety & mental fatigue become prime consideration in designing of overhead conveyers. In conventional conveyer system or over conveyer system I-Beam track are used, chain, side bars, center links, pins & high carbon steel wheels or rollers are used. All these mechanical parts creates huge noise & vibration during production run. This noise & vibrations are caused by surface contact of high carbon steel wheels that is too from both side of I-Beam track, during running condition. Also noise is caused by trolley with "H" or "I" attachment. - Instead of using high carbon steel rollers or wheels on I-Beam track, we could use hardened plastic spherical roller from one or either side of the I-Beam track, which will form only point contact with track & produce minimum noise & vibrations, also hardened plastic spherical rollers will helps for smooth running of conveyer.

IPR APPLICATION / PATENT NO. – 157/MUM/2015

CIPCIS 2020: P-067

An Alteration In A Pen For Easy Viewing Ability

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ABSTRACT-

A system for better viewing in case of writing letters or any document, the said system uses a combination of ball pen and a attachment of magnifying lens, the said magnifying lens attachment is to be fitted to a ball pen by some external arrangement, the said magnifying lens is of +8 diaptor, the said magnifying lens attachment can be adjusted depending upon the requirement, which helps for better viewing during writing. The overall cost of the said system is very small (Rs. 400)

IPR APPLICATION / PATENT NO. – 159/MUM/2015

CIPCIS2020, February 18-20, 2021



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-068

A Mobile-Portable Water Heater Attachable To Any Given Water Outlet Working On Domestic Electrical Supply

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ABSTRACT-

A system for heating running water from the domestic water outlets to any desired temperature. The device consists of the main heating unit plus an adapter that would be connected to any available electrical output. The main heating unit consists of a clamping mechanism that has been designed such that it facilitates the attachment and detachment of the heating unit from the water outlet. There is also a regulation knob that would help the user adjust the temperature of the water as desired. The required electrical input is supplied through the adapter. The Nicrome coil is the major heating unit internally working on the voltage-resistance relation. The complete system offers its users a time-saving, durable, portable and also inexpensive way of water heating with its price almost 33% of that of the conventional water heaters.

IPR APPLICATION / PATENT NO. – 1016/MUM/2015

CIPCIS 2020: P-069

A Portable Grinding Fixture For Regrinding Of Single Point Cutting Tool Of Lathe Machine

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ABSTRACT-

A system for regrinding the single point cutting tool of Lathe Machine, the said system uses a combination of Block along with LM guides, clamps, base plate, motor, battery, rack and pinion and screws, the said block is required to be mounted on LM guides, the said rack and pinion is to be fixed on block and motor respectively, the said motor fixed on base plate will transfer motion to block through rack and pinion, the motion of block is controlled by the switch, the amount of force required for grinding is controlled by motion of block towards grinding wheel. The said setup is able to provide exact angles on tool, the overall cost of installing this system is about Rs. 7000/-.

IPR APPLICATION / PATENT NO. – 965/MUM/2015

CIPCIS2020, February 18-20, 2021



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-070

Solar Powered Portable Bucket Air Conditioner

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ABSTRACT-

A normal air conditioning system consists of a vapor compression cycle comprising of a compressor, condenser, expansion valve and an evaporator; however this system has many moving parts as well as valves and consumes very high power even if it is switched on for a small duration of time; hence a new system have been introduced which is a new clean, and nonpolluting air conditioning system wherein air conditioner is a simple air conditioner powered by solar energy; this system works on the principle of forced convection and has chilled water kept in a Styrofoam bucket which is placed inside an outer plastic bucket and this Styrofoam bucket provides insulation to chilled water/ice; when air is blown over the chilled water, cool air is formed in the bucket and this cool air is circulated to the room with the help of PVC pipes provided on the periphery of the bucket; a photovoltaic cell which is placed outside of the house, and a small battery which is also fixed with the cell for powering the fan; this air conditioner is thus a best & most economical solution for the rural areas or any remote place of the world as; the only additional requirement for the system being chilled water which is available in almost everywhere in the domestic purpose.

IPR APPLICATION / PATENT NO. – 455/MUM/2015

CIPCIS 2020: P-071

Modified Paper Sheet Perforator Cum Stapler

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ABSTRACT-

A system which is a modified version of the paper sheet perforator (commonly known as "paper punching machine") also attached with a stapler. The conventional paper sheet perforator is reduced in size such that there is a provision for one punching hole instead of the conventional two punching hole. The assembly of the paper sheet perforator and the stapler is held together with the help of one long bolt which is 30 to 35mm. The entire assembly is of 45 to 55mm length and nearly 50 mm width. The sheet of paper that is to be punched is first folded (to obtain proper alignment) then inserted through the gap in the perforator. The result is that there are two holes on the sheet of paper by a single punch. The die plate (base plate) also has the provision for bending the staple pins and holding the plastic reservoir. The stapler that is attached is a medium sized stapler that is available in the market for a nominal cost. The base part of the stapler that does the bending of pins is incorporated within the base part of the device. So the working of two devices is done by a single apparatus. The main objective of this invention is to provide the benefits of two daily used devices into one. There is also a considerable reduction in space and material. This system can be used anywhere by students, clerks, office workers or anyone who use staplers and perforators for daily use. The system is reliable and works like the conventional devices.

IPR APPLICATION / PATENT NO. – 1614/MUM/2015

CIPCIS2020, February 18-20, 2021



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-072

A Clinical Thermometer For Rural India

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ABSTRACT-

A thermometric system for the rural India, said system comprising: input means adapted to receive contact with the human body whose body temperature is to be measured; the mercury bulb used to receive heat from the body whose temperature is to be measured; connecting wire of minimum resistance, said connecting wire is used to complete the electric circuit, is connected to mercury bulb at one end and to the button cell holder at the other end; button cell holder, said button cell holder is used to insert the button cell and is of the same specification as that of the button cell; button cell, said button cell is a silver cell and acts a source of electricity; LED (Light Emitting Diode), said LED acts as a visual indicator and lights up when the body temperature of the human body is greater than the normal body temperature and the connecting wires is again connected to the stem of the clinical thermometer allowing it to make contact with the mercury of bulb.

IPR APPLICATION / PATENT NO. – 2127/MUM/2015

CIPCIS 2020: P-073

A System Which Gives An Indication Before The LPG Cylinder Is Completely Empty And System Gives The Time For Which LPG Is Utilized

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ABSTRACT-

Gas cylinder getting empty suddenly, is the major problem faced by the many households and commercial users and also in case of emergency, changing empty cylinder is a time consuming process. So as to resolve this problem in today's time many people have invented a system which uses weight of the cylinder as a parameter to determine the quantity of Liquefied Petroleum Gas remaining in the cylinder. Some inventors have used load cell at the bottom of the cylinder which also rings the alarm before the cylinder gets empty. But as the cylinder is continuously placed on the load cell it can cause permanent deflection which results into error in the system. So, in this new invention, the gas stove is modified in such a way that it's displayed how much time the Liquefied Petroleum Gas in cylinder is utilized and an indication to order for the next gas.

IPR APPLICATION / PATENT NO. – 3433/MUM/2015



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CIPCIS 2020: P-074

Integrated Wireless Online Oil Condition And Oil Level Monitoring System For I C Engine

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ABSTRACT-

The deterioration rate of Lubricating oil in internal combustion engines is strongly depends on the blow by gases, the fuel quality, the ambient conditions and engine parameters like speed, distance travelled Engine temperature etc. In order to avoid an engines thermal fatigue failure, the oil must be changed in regular intervals i.e. before it loses its protective properties like Viscosity, Total acidic number and total base number, soot concentration and water content etc. At the same time, an unnecessary oil change should be avoided for environmental and economical reasons as still active additives left in the oil may react with the environment and may cause harmful effects. Also in our experimental study, we have tested above said properties of oil after every 1000 km distance travelled and it is proved that engine"s lubricating oil losing its protective properties before completion of 3000 km which is reference set by oil manufacturer as oil changed interval. Today, in automotive applications, condition of the engine oil is monitored indirectly by measuring engine"s operating parameters and they do not physically measure the condition of lubricating oil in the crankcase. The same system can"t tell if the oil is contaminated with coolant or soot, if additive packages are depleted and if it is low. Currently proposed wireless system uses Bluetooth technology which integrates oil condition and its level monitoring which uses temperature sensor, ultrasonic sensor and both the sensors are integrating with oil filling cap. Both the Sensor integrated with oil filling cap is put up in the engine crankcase. Programmable coding language will be developing for effectively analyzing the signals from sensors like oil level in engine crankcase and oil temperature to evaluate oil"s viscosity, soot concentration etc. and when different oil properties reaches its deterioration level or oil level falls below optimum level; corresponding indicator will indicates that the oil needs to be replace or fill.

IPR APPLICATION / PATENT NO. – 3106/MUM/2015



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CIPCIS 2020: P-075

System For Monitoring And Identifying The Working Status Of Appliances In A Network

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ABSTRACT-

The present invention relates to a System for monitoring and identifying the working status of appliances in a network using Android mobile or display device. The device will monitor all the appliances like an array of light bulb, array of Fans, array of speakers, array of water coolers or other appliances using an android application. In the present invention there is feedback unit which will be indicated on mobile application at the same time it will be displayed on controller using led's. There are many systems present but no one is telling about working status of appliances automatically. The present invention not only controls the switching of appliances but also the working status of appliances which can be seen on application. The microcontroller is used here to do controlling and as well monitoring according to feedback generated by sensors present near the appliances in realtime.

IPR APPLICATION / PATENT NO. – 4157/MUM/2015

CIPCIS 2020: P-076

Automatic Waste Segregator

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ABSTRACT-

says 1,60,000 metric tonnes is the amount of garbage India generates every day! Most of this is wet waste, which can be used to produce fertilizer and generate electricity. Studies say that waste which is segregated is very valuable which can be then used to produce fertilizers, generate biogas and electricity. Whereas, waste dumped unsorted in open, like it is done presently in India, produces harmful liquids and gases that spread diseases and also make that land barren on which it is dumped. So, effective and reliable waste management has become a need of the hour. The objective of this proposed project is to design a system to segregate the household waste into dry, wet and metallic waste. Waste is pushed through a flap into the proposed system. An IR proximity sensor detects this and starts the entire system. Waste then passes the metal detection system. This system is used to detect metallic waste. After this the object falls on the circular rotating disc. The waste is sensed by capacitive sensing module which determines the dry or waste wet based on its dielectric value. The circular disc then stops rotating and the waste is made to fall in the container of the corresponding garbage type.

IPR APPLICATION / PATENT NO. – 4828/MUM/2015

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-077

Wallet Protection And Monitoring Using Smartphone

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ABSTRACT-

A system is for the monitoring a men's wallet. Said system contains controller to monitor the valuables contain in the wallet. Valuables may be credit card, debit card, cash, other important document. These valuable are very important. Every time when we are leaving house, need to remember and check whether wallet is in your pocket or not and also valuables are in wallet or not. Said system provides a remainder for valuables. Said system also provided with anti-theft features. The said system has touch sensor mounted on outer body of wallet. The system will immediately notify to user when other human touches to wallet. The notification through sound in wallet and also on mobile. Said system can easily synch with mobile. Trough smart phones user can monitor wallet and elements containing in wallet. Said system uses Bluetooth and Wi-Fi modules to link with smart phones. Also said system help to search misplaced wallet through mobile.

IPR APPLICATION / PATENT NO. – 4614/MUM/2015

CIPCIS 2020: P-078

Smart Boxes Notifying Unavailability Of Grocery

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ABSTRACT-

According to this invention, there is provided a system for easy checking of availability of substances remaining in the smart boxes, if the substance quantity is less then we get notification. The said system uses weight sensor to calculate amount of substance quantity remaining in the smart box, the said system consisting of weight/load sensor is connected to controller to convert the data into specific format, the said system require Bluetooth module to be integrated on controller which can send data to mobile/tablet provided the bluetooth of mobile/tablet is ON.

IPR APPLICATION / PATENT NO. – 4488/MUM/2015



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CIPCIS 2020: P-079

Programmable Meal Feeding Robotic Arm For Handicapped

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ABSTRACT-

The system has been proposed such that it could benefit the society, specially to the people who are physically handicapped. Often we come across situation where people are not able to perform their day-to-day activities such as picking things up, placing or other activities including having their own meal. The system is proposed in consideration with such specially challenged people. The system comprises of microcontrollers, gesture controlled sensors and a robotic arm which is the main building block of the overall system. The arm could be such that it can be controlled using our foot movements in turn making the robotic arm perform its function of feeding the meal. Other way of controlling the system is through voice control which will enable the robotic arm to understand that the person is ready to take another bite. It can also be programmed by a normal human being as per the requirements of the situation using gestures movements which makes it possible to change the functioning of the arm.

IPR APPLICATION / PATENT NO. – 4615/MUM/2015

CIPCIS 2020: P-080

An Auto-Adjustable Headlamp Of The Vehicle For Safety Purpose

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ABSTRACT-

It is expected that both the drivers should shift their headlamps to the low beam for avoiding the problem of non-visibility of the road for certain time due to glare coming from the opposite light. But possible reasons for not keeping the headlamps on the low beams can be avoiding to move the lever time to time from high beam to low beam due to laziness and most of the times on low beam, left side of the roads are literally not visible (according to Indian driving conditions). If there is any pot holes pits or valleys on left side, we have to slow down the speed of the car so most of the drivers don't follow the rules which can lead to major accidents. In my concept I am developing the system in which only the right headlamp shifts to the low beam automatically and only if there is any possibility of the car coming from opposite side so that the visibility of left side is maintained and fatigue of the driver is also eliminated or reduced. According to the concept first of all the headlamps will originally on the high beam position and then the ultrasonic sensor will sense the obstruction which in our case is divider between roads. So if there is any divider both the headlamps will remain on high beam but if there's not, system will shift only right headlamp on low beam hence the problem will be solved.

IPR APPLICATION / PATENT NO.– 158/MUM/2015

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P- 081

Sign language Communication with Dumb and deaf people

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Manisha Prakash Kamble²

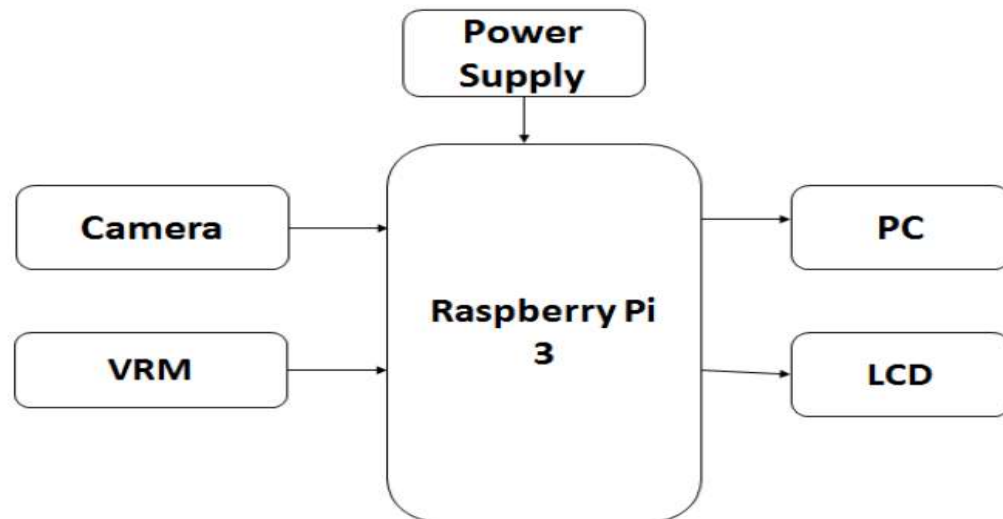
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ABSTRACT- Every day we see many people who are facing illness like deaf, dumb and blind etc. They face difficulty to interact with others. Previously developed techniques are all sensors based and they didn't give the general solution. This paper explains a new technique of virtual talking without sensors. An image processing technique called Histogram of gradient (HOG) along with artificial neural network (ANN) has been used to train the System. WebCamera is used to take the image of different sign gestures and that will be used as input to the Matlab. The software will recognizes the image and identities the cores pending voice output which is played using voice replay kit. This paper explains two way communications between the deaf, dumb and normal people which means the proposed system is capable of converting the sign language to text and voice. By using voice recognition module sound of normal people is converted to text. And this text will be understood by the dumb and deaf people.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate –IPR Grant Certificate

Certificate ID- 201921052215



CIPCIS 2020: P- 082

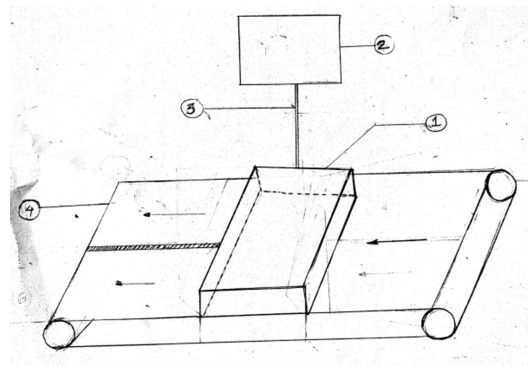
Fault Detection of Industrial Pipes Using Application of Image Processing

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Rupali Kawade⁵, Triveni Dhamale⁶**

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ABSTRACT- This innovation is based on automation in quality check procedure in industrial pipe manufacturing unit. It aims to reduce the duration required to evaluate the final product for any defects/faults and separate it from the finished and finalized product. It has multifold benefit to the manufacturing unit that includes reduction in the duration of quality check of the final product, increased accuracy and reduction of human intervention and resources in quality check process thus increasing the overall productivity of the manufacturing unit.

DIAGRAM/SCHEMATIC –



1 : Camera/ Scanner, 2 : PC with MATLAB, 3 : Serial Communication, 4 : Controller, 5 : Motor and Pipe Mechanism with conveyer

IPR Acknowledgement / Grant Certificate – CBR No. 27140

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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P- 083

Nanotechnology-Based Drug Delivery Systems and Herbal Medicines

Dr. Sohan S. Chitlange, Dr. Dheeraj H. Nagore, Pooja F. Kauthale, Rakesh S. Shivatare

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ABSTRACT- The present invention relates to a novel composition of Nanotechnology-Based Drug Delivery Systems i.e. Liquorice (*Glycyrrhiza glabra*), Manjishta (*Rubia cordifolia*), Tulsi (*Ocimum sanctum*), Jayphala (*Myristica fragrans*), Nagkesar (*Mesua ferrea*) and sesame oil. More specifically it relates to the field of method of preparation of topical dosage form based on nano technology having therapeutic properties. Further more specifically, it relates to Nanotechnology-Based Drug Delivery Systems based topical synergistic herbal formulations which are effective against wrinkle and other skin disorder, along with process for the preparation of the same in pharmaceutical acceptable dosage forms.

IPR Acknowledgement / Grant Certificate –

For the publication of his invention in the patent office journal number – 48/2020 Dated - 27/11/2020 Page number - 59592

http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929_1/Part-1.pdf



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CIPCIS 2020: P- 084

Method of Preparation of Nano-Emulsion with its Anti-Aging Action

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ABSTRACT- The present invention relates to a novel composition of Nanotechnology-Based Drug Delivery Systems i.e. Liquorice (*Glycyrrhiza glabra*), Manjishta (*Rubia cordifolia*), Tulsi (*Ocimum sanctum*), Jayphala (*Myristica fragrans*), Nagkesar (*Mesua ferrea*) and sesame oil. More specifically it relates to the field of method of preparation of topical dosage form based on nano technology having therapeutic properties. Further more specifically, it relates to Nanotechnology-Based Drug Delivery Systems based topical synergistic herbal formulations which are effective against wrinkle and other skin disorder, along with process for the preparation of the same in pharmaceutical acceptable dosage forms.

IPR Acknowledgement / Grant Certificate –

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27/11/2020 Page number - 59590**

http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929_1/Part-1.pdf



CIPCIS 2020: P- 085

Identification of New Compounds Aurantiamide Acetate from Phyllanthus Amarus and Peonidine 3-O-Sophoroside - 5-O Glucoside from Hibiscus Rosa- Sinensis

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ABSTRACT- The present invention relates to new chemical compounds isolated and purified from herbal medicines. Particularly, it relates to two previously unknown compounds which are aurantiamide acetate from Phyllanthus amarus and Peonidine 3-O-Sophoroside -5-O glucoside from Hibiscus rosa-sinensis.

IPR Acknowledgement / Grant Certificate –

**For the publication of his invention in the patent office journal number – 48/2020 Dated -
27/11/2020 Page number – 59591**

http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929_1/Part-1.pdf



CIPCIS 2020: P- 086

Biodegradable Bacoside Nanoparticles – Potential Molecule for Memory Impairment Disorders

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ABSTRACT- The present invention relates to methods and process of preparing biodegradable nanoparticles of Bacoside from Bacopa extract also evaluates the effect of novel Biodegradable Bacoside nanoparticles in Memory Impairment Disorders by using behavioral and Biochemical study on zebrafish model. Also evaluate the concentration of GSH, Lipid peroxidase, Ach level in zebrafish brain homogenate which indicate that the proposed nanoparticles of bacoside from Bacopa extract has very good effect on Memory Impairment Disorders.

IPR Acknowledgement / Grant Certificate –

**For the publication of his invention in the patent office journal number – 48/2020 Dated -
27/11/2020 Page number – 59587**

http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929_1/Part-1.pdf



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CIPCIS 2020: P- 087

Methods and Process for the Biodegradable Nanoparticles of Bacopa Extract

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Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.

ABSTRACT- The present invention relates to methods and process of preparing biodegradable nanoparticles of Bacopa extract. In more particular, the present invention relates to characterization of biodegradable nanoparticles was done by particle size analysis, zeta potential, DSC, XRD and SEM studies.

IPR Acknowledgement / Grant Certificate – For the publication of his invention in the patent office journal number – 48/2020 Dated - 27/11/2020 Page number – 59586
http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929_1/Part-1.pdf

CIPCIS 2020: P- 088

Anti-Obesity Fractions Prepared from Phyllanthus Amarus and Hibiscus Rosa- Sinensis and its Method of Preparation

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Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.

ABSTRACT- The present invention relates to a method of preparations of Phyllanthus amarus and Hibiscus rosa-sinensis fractions. In more particular, the present invention relates to fractions from Phyllanthus amarus and Hibiscus rosa-sinensis for treating obesity and associated metabolic Syndrome

IPR Acknowledgement / Grant Certificate – For the publication of his invention in the patent office journal number – 48/2020 Dated - 27/11/2020 Page number – 59584
http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929_1/Part-1.pdf

CIPCIS2020, February 18-20, 2021



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CIPCIS 2020: P- 089

A Method and Composition for Purification of textile waste-water

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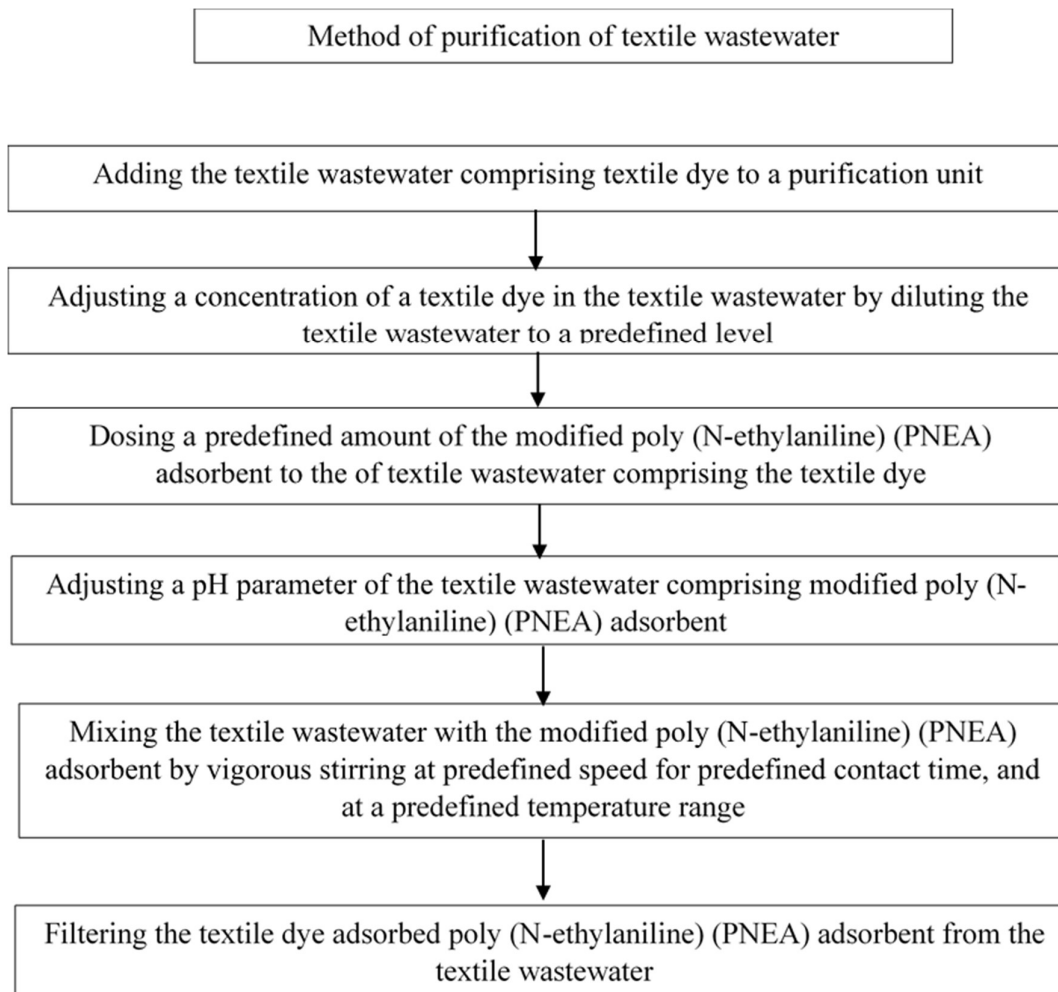
ABSTRACT-The present invention relates to a method of purification of textile wastewater effluent by adsorbing a textile dye over a surface of a modified adsorbent. The modified adsorbent in this case is a modified poly (N-ethylaniline) (PNEA). Wherein the acid doped poly (N-ethylaniline) (PNEA) polymer may be synthesized by a chemical polymerization of monomer N-ethylaniline using ammonium persulphate as oxidant agent and oxalic acid (OA) as doping reagent and can be employed for the eradication of toxic azo dyes Methyl orange and Basic red 46 from textile effluent. The method may comprise various steps such as, adding of the textile wastewater, adjusting the concentration of textile dye in the textile wastewater by dilution, dosing of the modified poly (N-ethylaniline) (PNEA) adsorbent, adjusting pH parameter above or below a predefined point zero charge (pHpzc) value based on an ionic character of dye, mixing the modified PNEA adsorbent at predefined contact time, temperature and speed, and filtering the textile dye adsorbed PNEA adsorbent from the textile wastewater, thereby eradicating the textile dye from the textile wastewater to obtain a purified textile wastewater effluent. Based on the experimentations, it was observed that, oxalic acid (OA) doped modified PNEA adsorbent was successfully employed for the elimination of anionic azo dye Methyl orange (MO) and cationic azo dye Basic red 46 (BR 46) from aqueous solutions. About 90% of adsorption was shown by doped PNEA for Methyl orange (MO) and 85% for Basic red 46 (BR 46). The results illustrated that elimination of both dyes was enormously dependent on pH and utmost elimination of MO and BR 46 was achieved at pH 3 and pH 8 respectively. Two well-known adsorption isotherm models were studied i. e. Langmuir and Freundlich. On drawing a comparison between the two isotherms concerning their coefficients of correlation (R^2), the Langmuir isotherm model was established as the most appropriate model, indicating a monolayer adsorption for both MO- PNEA and BR46- PNEA system. Lagergren's pseudo firstorder and pseudo secondorder kinetic models were applied for both MO- PNEA and BR46- PNEA systems. which illustrated that the pseudo second order model was the best suited model with high regression values obtained at all studied temperatures (30, 40 and 50 °C) for both studied systems. Adsorption capacity was found to increase with an increase in the temperature indicating the endothermic nature of the adsorption process. Thermodynamic investigations asserted that the adsorption process was feasible and spontaneous at all the studied temperatures supported by the negative values of Gibb's free energy, while the positive values of enthalpy and entropy signified the endothermic nature and enhanced randomness of the process, respectively. Based on the obtained results, it was concluded that OA doped PNEA was an excellent adsorbent to eliminate anionic dye (MO) and cationic dye (BR 46) from wastewater.



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**CONFERENCE ON IPR, PATENTS, COPYRIGHTS,
INNOVATIONS & STARTUPS (CIPCIS 2020)**



DIAGRAM/SCHEMATIC –



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P- 090

A System and Method for Treatment of Textile Waste-Water

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ABSTRACT-The present invention relates to a system (100) and method (200) for treatment of a textile wastewater effluent by reducing the suspended solids, intense color, odor, pH, chemical oxygen demand (COD), total dissolved solids (TDS), electrical conductivity (EC), and heavy metal content of textile effluent. The system (100) consists of coarse filtration (101), fine filtration units (102, 106, 109), surface modified weed bio-sorbent unit (103), aeration unit (104), solar-assisted electrolytic precipitation unit (105), germicidal treatment unit (107) and pH neutralization unit (108). This sequential order of system units and their easy preliminary set up is the key feature of the invention. The method (200) consists of coarse filtrating (201) via sand pack or equivalent filters (50-2000 microns) to remove particulate extraneous matter and cotton fibers present in the effluent similarly, fine filtering (202,206,209) used for removal of suspended particles (2.5 microns). Adsorbing method (203) used for adsorption and decolorization of an azo anionic dye present in the textile waste water by a surface-modified weed bio-sorbent comprising at least one of a Water Hyacinth (*Eichhornia crassipes*) and a Congress grass (*Parthenium Hysterophorus*). Aeration (204) of textile waste water was configured to expel dissolved gasses and for the air oxidation of dissolved moieties. Solar energy-assisted electrolytic precipitation (205) was configured for precipitation of organic, metallic, and organometallic compounds to reduced down the COD/ TDS/EC/heavy metal content. Germicidal treatment (207) was configured using a UV-C lamp to reduce down the germs and the bacterial growth in textile effluent. pH neutralization (208) was configured to maintain the neutral conditions of textile waste-water. Experimental evaluations of the present invention provide almost completely decolorized (about 89-94%-using surface-modified weed stem powder), particle-free and odorless treated water, with the acceptable levels of heavy metals (Lead- not detected, Arsenic- not detected, Zinc- 0.5 to 0.8 mg /L), TDS (3021-3325 mg/L), COD (1409mg/L) pH (7.1-7.15) and EC (4.3-4.9 mMHos/cm), which was an edge over superior to the results obtained with the usage of Activated Charcoal (AC). Operational cost being an imperative factor, for this experimental design estimated to be 1.7 USD/1000L of effluent made the invention cost-competitive. The present invention thus brings a unique combination of simple unit operations along with the utilization of innovative biosorbents and unconventional energy sources to drive the textile effluent purification process. Usage of unwanted and undesirable waste weeds like Water Hyacinth and Congress grass to formulate an efficient biosorbent using a path-breaking surface treatment procedure provides a superior alternative to the commercial-grade AC in the effluent decolorization process. These naturally originated biosorbents are bio-degradable and avoid secondary pollution. Solar energy-driven design of electrolytic precipitators minimizes the energy demand for the process, made the technique eco-friendly, cost-effective, and sustainable.

DIAGRAM/SCHEMATIC –

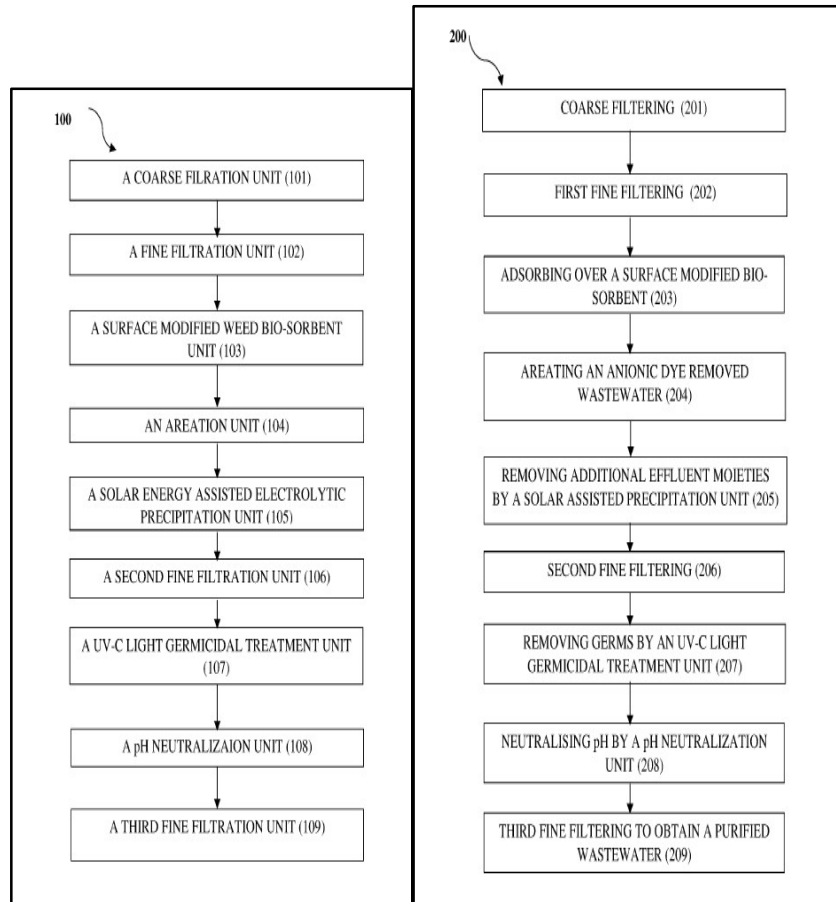


Fig. 1(a)

Fig. 1(b)

Fig. 1 (a)System (100), (b) method (200) for treatment of a textile wastewater effluent

IPR Acknowledgement / Grant Certificate –

National patent -Patent is filed and Published by Indian Patent Application No. IN 201921045512A is published on 06.12.2019 by Indian Patent Office (Mumbai Branch)

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CIPCIS 2020: P-091

Detection of Crop Diseases Using Image Processing & Atmospheric Condition and Suggesting Remedy

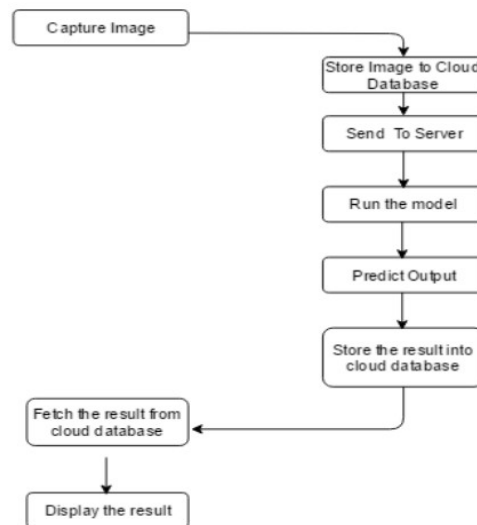
Pradnya Vitthal Dhende¹, Rachana Raju Patil¹, Kirti Bhaskarrao Deshmukh¹, Nagini Mallikarjun Kangle¹, Bashirahamad Fardin Momin¹, Medha Abhijeet Shah¹

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ABSTRACT-

This invention is based on the process to detect the crop disease at early stage to take correction action using image processing technique, the said process wherein the crop disease detection system with the help of cloud database and server interaction for result analysis and providing corresponding disease information with nearby Krushi Centers, for the said process, the input is captured image, all atmospheric conditions and this information is then stored to cloud database and used for computation and processing at server side and then predicted results are send to database for future analysis and result also send to user with detailed description as reasons, defects caused by corresponding disease and nearby agriculture centers for further prevention, thus the process can easily detect the crop disease and identify the remedies and can plan respective correction action.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921038636



CIPCIS 2020: P-092

Alteration in Bike Helmet for Better Audibility During Riding By Providing Air Breath Sliding Windows

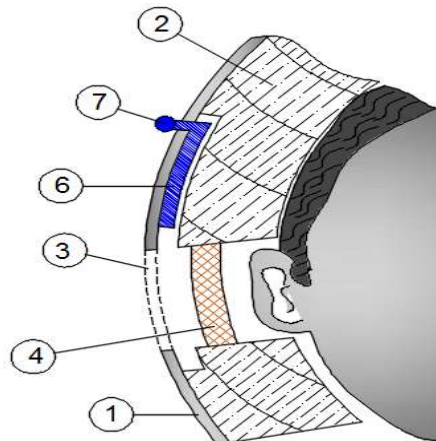
**Dhanaji Raghunath Jadhav¹, Anjani Dhanaji Jadhav¹, Anant Balaso Khandkole¹,
Rushikesh Shirish Pande¹, Sandip Anandrao Shewale¹**

¹Nutan Maharashtra Vidya Polytechnic, echanical Department, TalegaonDabhade, Pune, 410507, Maharashtra, India

ABSTRACT-

This innovation is based on providing a sliding windows in bike helmet for rider's ears to enhance the audibility of rider and at the same time windows are provided with detachable air filter for clean air breathing of helmet for more comfort and also provide a space for ear to get accommodate in to the window pocket so that it remain un-pressed and naturally open.

DIAGRAM / SCHEMATIC –



1 : Helmet Outer Shell, 2 : Cushioning of Helmet, 3 : Window, 4 : Air Filter, 5 : Helmet

IPR APPLICATION / PATENT NO. – 201821004386



CIPCIS 2020: P-093

An Automatic Potato Sowing Mechanism

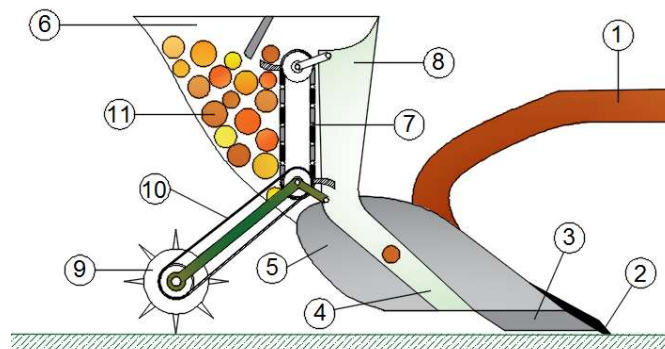
Rushikesh Shivaji Gambhire¹, Shivaji Santram Gambhire¹

¹Computer Department, Alard College of Engineering, Marunji, Hinjewadi, Pune, 411057, Maharashtra, India.

ABSTRACT-

This innovation is based on an automatic sowing mechanism for potato, which is otherwise a lots of effort and time consuming task, the said mechanism consist of a conveyer which pickup a potato seedlings and drop to sowing hopper which then pass through the channel and sow into the dig made by the preceding plough, the sowing distance between two, can be adjusted by the various pulley combination in belt drive system and also by using different number of picker troughs on conveyer, thus the potato are sowed at the equal depth and hence increase the productivity at minimum human effort and in less time.

DIAGRAM / SCHEMATIC –



1 : Beam, 2 ; Chisel, 3 : Share, 4 : Sowing Hopper Channel, 5 : Mouldboard, 6 : Feeder, 7 : Conveyer, 8 : Sowing Hopper, 9 : Sowing Speed Control Wheel, 10 : Belt Drive, 11 : Potato

IPR APPLICATION / PATENT NO. – 201821012927

CIPCIS 2020: P-094

Alteration in Heating System by Using Additional Submerged Coil Hot Air Heating System

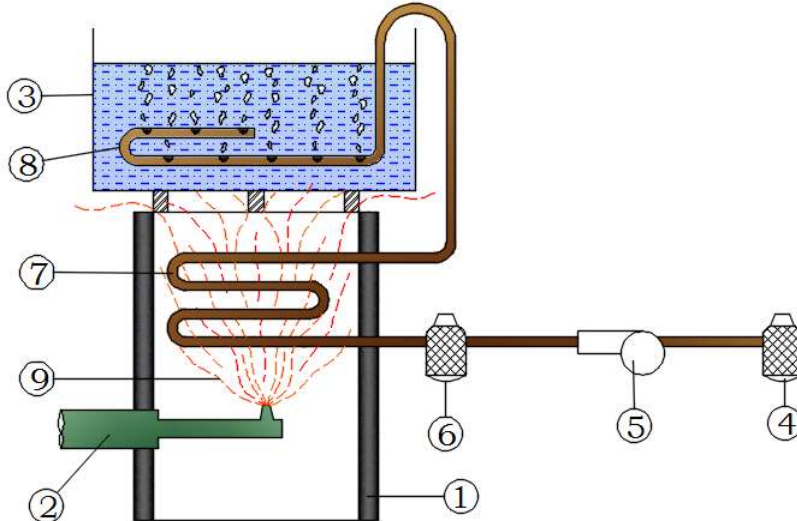
RanjanaUddharao Dhote¹, AmolUddharaoDhote¹

¹G2-111, Indra Park, Near Police Station, Chinchwadgaon, Pune, (MS) India.

ABSTRACT-

This innovation is based on providing an additional submerged coil hot air heating system, which utilized heat from hot flue gases, and heat up incoming clean air, the said hot air is then supplied to submerged type hot air delivery coil which delivered heat directly to the substance and the during its extraction it produces turbulence which enhances the spreading of heat throughout the substance, this reduces the net heat requirement as well as the waiting time period for heating.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821012925



CIPCIS 2020: P-095

Illumination Sensing System to Give Automatic Passing Indication to Opposite Vehicle Head Lamps

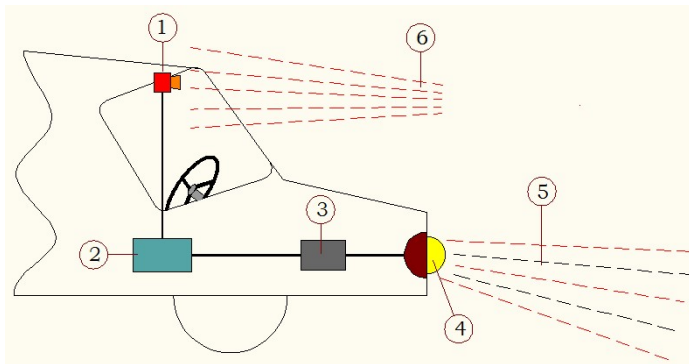
**Sandeep Prakash Patil¹, Sayali Nitin Mane¹, Nitin Vishwasrao Mane¹, Yuvraj Ramrao Patil¹,
Jyoti Jagannath Jadhav¹**

¹Flat No. 604, Devrai Phase-2, Sr. No. 82/P, Near Bapdev Chowk, Kiwale, Tal.- Haveli, Pune – 412101, Maharashtra, India.

ABSTRACT-

This innovation is based on providing an automatic shifting high beam to low beam and vice versa for automobile head lamps using opposed vehicle illumination sensing, this can improve visual identifiability of vehicle at dim dusk, this system consist of the illumination detector sensor and electronic control unit which record and analyze the illumination of opposed vehicle and corresponding actuation signal is generate and send to lighting control unit which shift over the high beam to low beam of the vehicle head lamp automatically, thus the night driving road visibility is improve and human interfere for giving pass or manual changing high beam to low beam is eliminated for better driving experience.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821039900



CIPCIS 2020: P-096

Self Adjusting Traffic Signal Timing By Monitoring Traffic Flow

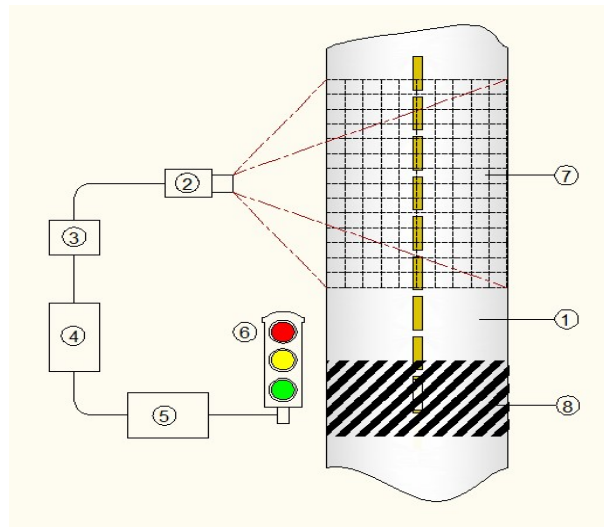
Sangita Sanjay Mane¹

¹Hill Top Recidency, P-4/201, Behind Akurdi Railway Station, Ravet, Pune, PIN-412101, Maharashtra, India..

ABSTRACT-

This innovation is based on providing traffic flow monitoring system which capture the live video of the segment of roadway, and the information is supplied to vision processor in the form of analog data, this data then processed and convert to digital signal and then with the help of electronic control unit, the data is analyzed and traffic signal time interval is varied according to the traffic flow and thus traffic signal operated for this new time interval which may change as the traffic flow changes, hence by allowing more time to relieved the traffic in heavy traffic flow direction and reducing time on low traffic flow direction, this system minimizes the traffic jams.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821004395

CIPCIS 2020: P-097

Inbuilt Lifting and Caterpillar Tracks Drive for to Pull out Vehicle When Wheel is Sink into Soil

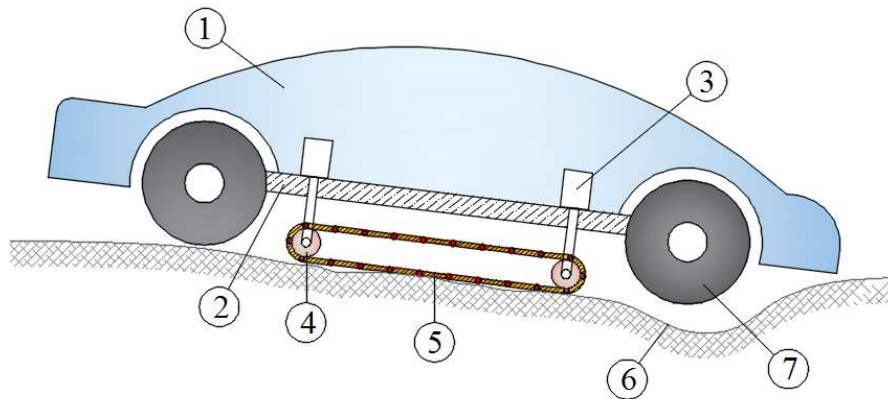
Sarthak Gajendra Kshirsagar ¹, Varun Pramod Katkar ¹

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ABSTRACT-

This innovation is based on providing an alternative drive system in terms of caterpillar track which is used to move the vehicle when the main drive system is not functioning, most commonly when drive on soft soil like desert and also a lifting inbuilt system which lift the vehicle if the wheel is sink into the soil or using caterpillar drive system, thus the sink wheel is lifted up using pneumatic telescopic cylinder and then using caterpillar drive it is pull out from the dig or sink.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821012926



CIPCIS 2020: P-098

Vehicle Tire Wear Out Engraved Studs Indicator

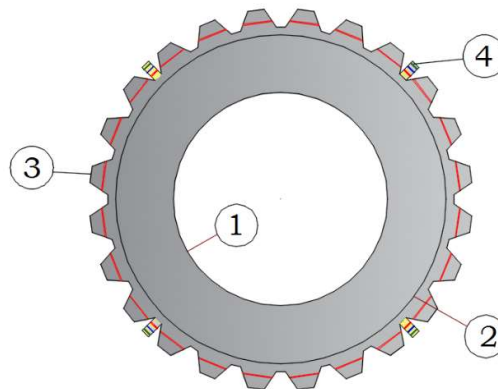
**Sayali Nitin Mane, Jyoti Jagannath Jadhav, Nitin Vishwasrao Mane,
Sandeep Prakash Patil, Yuvraj Ramrao Patil**

¹E-601, Runals Royal Casa, Near Bank of Maharashtra, Ravet, Tal.- Haveli, Pune – 412101, Maharashtra, India.

ABSTRACT-

This innovation is based on providing a color layer in the tire at a certain depth of the tire grooves beyond which if wear is exceed then tire does not provide the sufficient grip on road and get skidded and also there is a power loss because of less in traction, the system only visually indicate the time for replacement of tire or remolding for new traction when wear is exceed the certain limit, the system may incorporate the different color layer at different depth of tire grooves to show the severity of the tire wear and intern the tire life.

DIAGRAM / SCHEMATIC –



1 : Tire Bead, 2 : Tire Inner Liner, 3 : Tire Tread, 4 : Engrave Studs

IPR APPLICATION / PATENT NO. – 201821049528

CIPCIS 2020: P-099

Magneto-Rheological Strut for Light Commercial Vehicle

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ABSTRACT-

The use of suspension system is to enhance ride comfort and road holding which are conflicting with each other, these two characteristics compromise each other for comfort as well as good handling, the magneto-rheological damper is assembly of cylinder, piston wound with copper winding, piston rod with through hole, the said piston though piston rod is connected to sprung mass whereas cylinder end is connected to unsprung mass of vehicle, the said magneto-rheological fluid is filled between the piston and cylinder, the said magneto-rheological fluid changes its viscosity as per magneto-rheological properties of fluid, as the intensity of magnetic field whose intensity is control by the current in damper thus the fluid resistant to flow absorb the shock applied by the road bumps to unsprung mass is damp by damper.

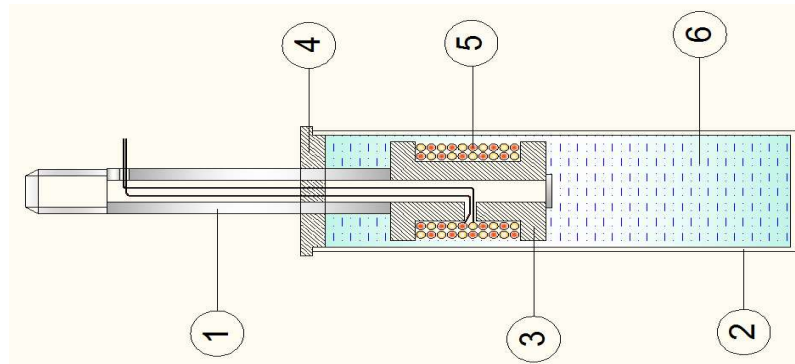


DIAGRAM / SCHEMATIC –

IPR APPLICATION / PATENT NO. – 201821006522



CIPCIS 2020: P-100

Automatic Opening and Closing of Two Wheeler Foot Rest Controlled By Ignition Switch On/Off Position

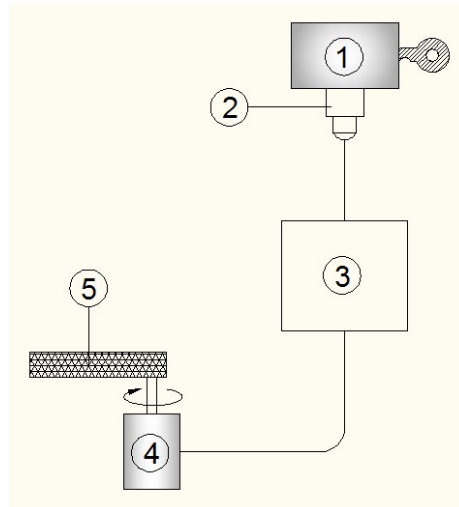
**Amol Subhash Khursule, Mayur Vijay Shinde, Somnath Gulab Jambhulkar,
Prasanna Ankush Ghojage**

430 Shukrawar Peth, Dabhade Aali, Talegaon Dabhade, Tal.- Maval, Dist. – Pune, PIN - 410507, Maharashtra, India.

ABSTRACT-

This innovation is based on providing a system which senses the position of the key in the ignition switch by using the proximity sensor and thus a signal send to programmed power supply base which send the corresponding electrical pulse to the DC motor, the said DC motor then convert the electrical pulse into mechanical work in terms of rotation of shaft in particular direction which moves foot rest in outward direction and thus foot rest open to rest the riders foot, when DC motor received opposite programmed electrical pulse then it rotates in opposite direction and move the foot rest inward to closing position, thus this system provide automatic opening and closing of foot rest of two wheeler by sensing the ignition ON / OFF position.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821004392



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CIPCIS 2020: P-101

Brainy Traffic Control System

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ABSTRACT-

The traffic signals used today works on counters and accordingly controls the traffic. The system used goes red or green for a fixed time irrespective of the traffic density on any particular road. This leads to traffic chaos on a very busy road. Our signal works exactly the same but is smart enough to judge which signal to go green and how long to remain green. As per our proposed idea:- We will use sensors which will check if any road has high traffic. Now we have two possibilities 1) If the sensors do not detect heavy traffic then it will force the controller to act as the conventional signal. 2) If the sensors detect heavy traffic then it will give an additional delay to that road when its turn comes. This can help reduce traffic on a densely populated road. And it will take care of all the disadvantages of the system being used today.

IPR APPLICATION / PATENT NO. – 4958/MUM/2015

CIPCIS 2020: P-102

Driver Aligned Seat Belt Position Sensor To Avoid False Use Of Seat Belt Safety System

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ABSTRACT-

A System For Proper Use Of Seatbelt Safety System, The Said System Uses A Seatbelt With Heartbeat Sensor/Strain Gauge, The Said Arrangement Enables Driver To Wear The Seatbelt From Backside To Avoid Uncomfortable Feeling Or Due To Laziness By Using Heartbeat Sensor With Seatbelt Which Sense The Heartbeats Of Driver And Continuous Warning Alarm Is Given By Locking Sensor Till Driver Locks Seatbelt From Front Side, Modification Over Conventional Seatbelt System Which Unable To Locate Proper Position Of Seatbelt, Sensing Position Of Seatbelt With Respect To Driver, Over The Chest Of Driver, Ensure Proper Locking Of Seatbelt, Avoid Improper Use Of Seatbelt,Ensures Safety Of Driver And Occupants And Minimizes The Possibilities Of Body Damage During Accidents, Helpful To Avoid Violation Of Traffic Rules.

IPR APPLICATION / PATENT NO.– 2186/MUM/2015

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-103

Optimization Of Overhead Conveyers For Noise, Vibration Reduction & Stable Operation

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ABSTRACT-

An overhead conveyer system for noise, vibration reduction & stable operation comprising: - A conveyer system which is a common piece of mechanical handling equipment that moves, transport products, pieces or parts from one location to another, the said system is especially useful in applications involving the transportation of heavy or bulky loads and odd shaped items to suitable location, it allow quick and efficient transportation for a wide variety of materials, which make them very popular in the material handling and packaging industries. Conveyer systems are used widespread across a range of industries due to the numerous benefits they provide in material handling. - As conveyer systems are commonly used in many industries, including the automotive, agricultural, computer, electronic, food processing, aerospace, pharmaceutical, chemical, bottling and canning, print finishing and packaging, safety & mental fatigue become prime consideration in designing of overhead conveyers. In conventional conveyer system or over conveyer system I-Beam track are used, chain, side bars, center links, pins & high carbon steel wheels or rollers are used. All these mechanical parts creates huge noise & vibration during production run. This noise & vibrations are caused by surface contact of high carbon steel wheels that is too from both side of I-Beam track, during running condition. Also noise is caused by trolley with "H" or "I" attachment.

IPR APPLICATION / PATENT NO.- 157/MUM/2015

CIPCIS 2020: P-104

Renewable Energy Portable Laptop Charger

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ABSTRACT-

The laptops used today, produce a significant amount of heat, all of which is lost. Due to this reason, the battery is not used to its full potential. The idea behind this patent is to utilize this wasted energy to improve the battery life of a laptop. This can be achieved using the principle of thermocouples. The more the heat generated, the more it will charge the battery.

IPR APPLICATION / PATENT NO.- 201621009917



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-105

An Innovative Lead Of Lead Pencil With Marking On Lead

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9404202147

ABSTRACT-

A Lead in mechanical pencil is surprisingly finished at any stage of work, hence in this work a system is made that will indicate before lead is going to finish in mechanical pencil with the help of colour indicator on lead; the said lead pencil has all the necessary components of conventional lead pencil, the said lead of the pencil will have a coloured end, the said coloured end of the pencil gives indication with the help of coloured strap, the said coloured strap can be of any colour which will be distinct from the lead colour, the said lead pencils push mechanism pushes the lead in conventional manner, the said coloured lead is coloured only from outside, the use of this arrangement is to get prior intimation before the end of the useful portion of the lead, colour will be placed at a specific distance from starting point of lead to the end point of lead; eventually telling about that colour will be near to the finishing end of lead with specific distance of strap, when a person will see that indicator colour and will come to know that lead will finish in few time and will keep additional lead with him/her to avoid further losses; a lead may be of any diameter including from 0.2 to 5.6 mm and with different length, the cost to provide coloured strap is negligible.

IPR APPLICATION / PATENT NO.– 201621004333

CIPCIS 2020: P-106

Design And Development Of Car Seat Constrainer System

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ABSTRACT-

A conventional car seat which is only adjustable in forward and the reverse movement by being fixed on the floor, is a convenient way for adjusting the distance between the pedals and the seat. But as it may, likewise, this can be perilous if the same is performed while the vehicle is mobile, as it would distract the driver to adjust the position of the seat rather than driving. In view of the foregoing, an object of the present invention is to provide a locking mechanism to prevent the driver from adjusting the position whilst the vehicle is in motion, to prevent any hazards that can take place due to the lack of focus of driver.

IPR APPLICATION / PATENT NO. – 201821020932

CIPCIS2020, February 18-20, 2021



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CIPCIS 2020: P-107

Utilization Of Heat Released During Cooking With Heat Pipe Embedded Thermal Energy Storage

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8237812926

ABSTRACT-

According to this invention, there is a system provided for thermal energy storage in a cylindrical chamber, said system comprises: - A cylindrical tank made of stainless steel well insulated with an openable cover from top. - Two chambers in the tank separated by a copper plate - Embedded gravity assisted heat pipes in insulated tank such that evaporator section of the pipe lies below the copper plate and the condenser section lies above it. The copper plates have hole through it such that heat pipes just passes through the holes of the plate. - Stainless steel pipes which are made such that it entraps the steam which is released from cooking systems in household and commercial applications, like from a pressure cooker with its lid at the mouth of exit of steam from cooker and also a removable circular trapping element attached to the pipe which will entrap the steam from circular top vessels which are used for boiling purposes and this will direct the flow of steam in the pipe having a control valve which leads to bottom section of tank for storing its thermal energy. - Pipes carrying room temperature water to upper section of tank having an inlet valve and carrying hot water from bottom of upper section having an outlet valve to the end user. When the stainless steel pipes carry the steam into the tank, the evaporator section of the heat pipe in bottom section of tank thus gets heated up. This evaporates the working fluid of heat pipe carrying the latent heat to its condenser section. In the condenser section, the heat pipe gives off its heat by the condensing of its working fluid. As the condenser section of heat pipe lies in upper section of tank, this thus heats the incoming water or if required, any other fluid which comes in to upper section of tank through the inlet pipe. After a certain time interval, as the heat transfer takes place from condenser section of heat pipes to incoming water, water gets heated up without requiring any external electricity or any other power source. The hot water can thus be withdrawn by opening the exit valve in tank's upper section and can be provided to the end user through outlet pipe.

IPR APPLICATION / PATENT NO.- 201621022091



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-108

Novel Wiper Mechanism For Controlled Cleaning Of Windscreen

ANIKET VILAS BOROLE1

1Pimpri Chinchwad College of Engineering, Sector 26, Pradhikaran Nigdi, Pune-411044, borole.aniket551@gmail.com, 9511901065

ABSTRACT-

A double slider mechanism for motion of single wiper blade, the said mechanism uses a combination of a link which has two sliders attached to it, the said link is the wiper arm with a rubber or synthetic material wiper blade attached beneath the wiper arm to clean the windscreen, the said slider arms are connected to the slider pins as shown in the accompanying drawings, the said slider pins are provided to allow free rotation of the slider arm about the pin and to move the arm along the said guide-ways on the wiper arm to control the movement of the wiper and when the power is transmitted to one slider arm it moves the wiper arm with the help of slider pin, the said wiper cleans the required portion on the screen and then comes back to its mean position, the said motion continues for the other unclean portion of the screen and if the driver requires cleaning the portion of the windscreen in front of the said driver, then with a press of a button on dashboard the power will be only transmitted to the slider link which will control the said wiper arm to clean the portion of the windscreen in front of the said driver.

IPR APPLICATION / PATENT NO.– 201621012927

CIPCIS 2020: P-109

Burning Feet Sole Cooler

Tamboli Ayub Alamso,

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ABSTRACT-

The present invention relates to solar powered ice box integrated with thermoelectric generator and cooler. The invented device works on solar energy and does not require any additional power source in any form. The device generates the electric power by using solar energy as heat source through thermoelectric generator. The electric energy stored can be further supplied to the thermoelectric cooler and cooling effect can be generated. The device is portable in nature and can be mounted directly on the bicycle, tricycle, trolley and cart. The invented solar powered ice box can be used for the icebox cargo bicycles or tricycles, ice cream trucks, refrigerated cargo tricycle, ice cream cart, Ice Cream Rickshaw. The invented system can be used in ice cream cart manufacturing industry.

IPR APPLICATION / PATENT NO. – 201821035732C

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-110

An Innovative Base Adjustable Two In One Stapler Punching Machine With A Two- Hole Punching Mechanism

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ABSTRACT-

This invention deals with providing convenience to the people working in the Offices or even in the government sector, whereas also in the banks or places where documents are needed to punch and staple together. In general, by the help of this mechanism stated in this invention the user gets to use both combinations of the mechanism by only adjusting the screw type locking system which is attached to both stapler as well as the punching unit. A problem always arises whenever we have to attach any document and at the same time we have to punch any bunch of documents we have to carry the stapler as well as the punching unit at the same time, and many times the situation takes place that we may forget to carry either the stapler or the punching unit which can prove very irritating at the time of hurry. Thus, this is the device or the unit that can serve both the need from stapling the documents to punching the documents in a single mechanism. More particularly this invention will help the user to either punch the documents or either staple the documents or both punch and staple the document the whole at the same time with a single press of the machine. Also, the cost of this unit would be much less as compared to the cost of individual stapler and punching units which are separately available in the market right now. Thus, this invention mainly focuses on providing the easiness and comfort to the user. A special purpose locking and unlocking system or a mechanism or we can simply call it as a key, is also introduced in this invention through which we can either do the stapling or punching individually or both at the same time by just adjusting the screw by locking and unlocking method. Now another big advantage in this invention is that we can adjust the base of the stapler and punching on which they are mounted. The advantage of this mechanism is mainly that we can adjust the width or the distance between points where we have to punch and the point where we have to staple as the distance may differ according to the side of the paper. Also, another plus point of this invention is that we can punch the two holes at the same time in the document rather than just one-hole punch mechanism, this is basically a short description or introduction to the following invention. Also, another interesting feature of this invention is that many times we have to choose the stapler according to the requirement and fulfillment of our purpose. In simple words there are different types of staplers available in the market according to the size of the stapler pins example big medium small sized pins. So, we may need to carry different staplers for different purposes if needed which can prove to be very annoying. So, this invention particularly houses a stapler which can adjust the pin compartment according to the size of the pin we have to use.

IPR APPLICATION / PATENT NO.– 201621042088



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CIPCIS 2020: P-111

Synchronized Power Windows With Auto Air Conditioners For Reducing Human Efforts And Power Wastage

**MR. LOHAR GANESH SAYAJI, MR. MORE SWAPNIL SUBHASH, MR. WARULE VAIBHAV
URYAJ, MR. PETKAR ROHAN UMESH**

A404, Snehal Apartment plot 1T0 - INDIAN _ 40,41,42, Rajendranagar, Talegaon . Dabhade, 410506, loharganesh16@gmail.com,
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ABSTRACT-

There has been a progressive development in the Automobile industry. The maximum development has come in the comfort of the passengers. The manual hand cranking to uplift the windows was replaced by power windows. To decrease the temperature of automobiles in hot summer days and to increase the temperature in cold winter days Auto Air Conditioning systems was implemented. There were lots of developments in these fields but there is no systems which synchronizes Auto Air conditioners with power windows. In existing system windows control and air conditioner both switch are working separately. So driver required controlling both separately and some time he has forgotten to close the windows. We have made an attempt to connect the input of Auto Air Conditioner to the power window of the Automobile. This will ensure that when we press the AC button on the dashboard then the windows will get closed automatically as the air conditioner starts to operate. This will help to save the power that is wasted because of negligence which is offered by the passengers and it also reduces efforts required to close the window while driving. Keeping the windows open during use of AC will result in more consumption of power as we increase the volume of the region that is to be cooled. This is also help to reduce human effort which will be required to close power window before starting Auto air conditioner.

IPR APPLICATION / PATENT NO.- 201721008215



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CIPCIS 2020: P-112

Generation Of Electricity With The Help Of Condenser Fan Motor Of A Split Air Conditioner

**MR. LOHAR GANESH SAYAJI, MR. MORE SWAPNIL SUBHASH, MR. PETKAR ROHAN UMESH
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ABSTRACT-

There has been progressive development in the field of Refrigeration and Air Conditioning. There is ever increasing demand for the field as it gives human comfort and also helps in preserving and processing variety of things. Mainly the air conditioners have 3 units that consume the electric power which are compressor, condenser fan and blower fan. In the modern world it is necessary to preserve as much power as we can and hence we have come up with this innovation. In our system we basically give power Only to the condenser fan. A shaft is extended from the condenser motor which is loaded with the armature coil. This entire setup of armature coil is surrounded by magnetic poles which produce flux with minimum possible flux. The magnetic poles are fixed on the yoke or the frame. Now, as the shaft rotates the armature winding cuts the flux and according to the Faraday's Law, EMF is generated. This generated voltage is then supplied to compressor and the blower fan. This generated voltage if required can also be supplied for charging of inverter batteries and other appliances if needed.

IPR APPLICATION / PATENT NO.- 201721009534

CIPCIS 2020: P-113

An Automated Mechanism For Effective Cooling Of Solar Panel

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ABSTRACT-

An automated mechanism is developed for effective cooling of solar panel. As we know the efficiency of the solar panel decreases by half percent for every 1 °C rise above the 25 °C (25 °C is a standard temperature for getting maximum efficiency of the panel). In this attempt we are lowering the solar cell temperature by blowing the fresh ambient air continuously with the help of DC blower on the back side of photovoltaic panel where thermal paste and Aluminum chips is applied. After passing over the back surface of the photovoltaic panel, the air gets heated which is supplied to dryer cabinet where the products to be dried are kept. Due to this mechanism we will reduce a panel temperature by 20 °C and will get improved efficiency of solar panel along with hygienically dried product with reach in taste and aroma.

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-114

Thermal Comfort Enhancement Of Ceiling Fan (Cooling Mode) Integrated With Peltier Cooler, Heat Pipe, Phase Change Material And Adsorbent. (Air Conditioned Ceiling Fan)

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ABSTRACT-

This invention relates to the thermal comfort enhancement of ceiling fan (cooling mode) integrated with Peltier Cooler, Heat Pipe and Phase Change Material. Assembly of the peltier cooler and heat pipe is mounted on the ceiling fan blades and supplied with the electrical energy. Cooling effect produced by peltier cooler is imparted to the air coming in contact with the ceiling fan blades and heat dissipated by peltier cooler is transferred to the phase change material stored in the roof mounted energy storage container via heat pipe. The device invented can be incorporated in the household and industrial ceiling fans to enhance the thermal comfort obtained. Device is cost effective and gives instant cooling effect. All industries which are involved in manufacturing of the household and industrial ceiling fans can use this assembly without any modifications in their designs to enhance the thermal comfort.

IPR APPLICATION / PATENT NO. – 2018210339146

CIPCIS 2020: P-115

Clothing Iron Sole Cooler Cum Safety Kit

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ABSTRACT-

The present invention relates to self-powered safety kit for clothing iron which gives fast cooling of iron sole and reduces accidental injury with effective utilization of unused heat. Temperature difference between sole of the clothing iron and is in the horizontal position and after a longer period if the iron is vertical. A variety of arrangements are proposed, including some that sense movement of the iron and others that respond to a user's grasp. The invented clothing iron sole cooler cum safety kit overcomes the limitations of the existing technologies/methods and devices developed by previous inventors. The safety kit consists of the thermoelectric generators and peltier coolers which simultaneously gives power generation and cooling effect.

PR APPLICATION / PATENT NO. – 201821036606



CIPCIS 2020: P-116

Energy Optimized Routing Protocol Using Swarm Intelligence With Mobile Sink In Heterogeneous Wireless Sensor Network

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ABSTRACT-

In Health care Wireless Sensor Network (WSN), congestion obtained when the incoming rate of all sources goes beyond the occupied capacity of sensor nodes. Drop of packets in the buffer, increased end-to-end delay, decreased packet delivery ratio and decreased lifetime of sensor nodes (excessive energy consumption of sensor nodes) are some of the issues looked because of congestion. The congestion must be controlled for increasing the lifetime of sensor nodes. Wireless Sensor Networks are finding applications in many areas. In this context, there is a need to manage the battery resources used by the WSNs in a better way in terms of lifetime, stability and energy efficiency. In this project, the data is collected by the sensor nodes and transmitted to the cluster heads through their respective relay nodes. The compressed data is transferred by the cluster head to the nearest rendezvous nodes in a certain number of rounds, depending upon the compression ratio. Finally, the mobile sink gathers the data while moving through the rendezvous nodes in the network. Experimental results show that the stability period of the proposed network is much better than the existing protocols. The proposed algorithm is 1.6 times better than SEP, 1.5 better than DEEC and 1.3 better than TSEP in a 100m— 100m region. The proposed algorithm holds good even when the area of the region is increased.

IPR APPLICATION / PATENT NO. – 201921028010

CIPCIS 2020: P-117

Disk Cleaning And Automatic Disk Cooling Mechanism With Color Coded Wear Measurement Technique In Disk Pads

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ABSTRACT-

This invention discloses the unique technique describing the wear factor associated with disk pad. Every friction pad of a disc is given a Particular paint on lower end of disk pad device in operation. Once the pad is worn to beyond an allowable wear limit thereby causing a warning color getting highlighted and the disk to be lit with that color and indicating the operator that disk pad is worn out and needs replacement, various depth gauges and sensor based devices are innovated till date, but this invention work utilize easy methodology and any one can detect the wear rate of disk pad promptly. The middle layer of self cleaning mechanism will keep the disk free from debris and cool down disk rapidly. It is associate degree object of the current invention to beat the on top of delineate difficulties incidental the acknowledged art and to produce, in an exceedingly disc brake of the moment category, a wear alarm system of extremely reliable operation.

IPR APPLICATION / PATENT NO. – 201921041362



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CIPCIS 2020: P-118

System And Method For Speaker Identification Using Geographical Region Language

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Zeal College of Engineering & Research Narhe,shirs112@yahoo.co.in2

ABSTRACT-

In this system and method for speaker identification using Geographical region language to develop this system the primary challenge ahead in developing a technique for geographical region language identification of a speaker is to accomplish remarkable recognition accuracy. Hence, the primary objectives of this idea are to construct a speech database of speakers of different geographical regions. Once the database is developed the next step will be to extract features of the speech signals using feature extraction technique and compare the features for the classification of the features various classifiers are available but the most promising classifier like SVM has to be used to classify the appropriate features using classification technique and investigate the performance. To design and develop a geographical region language identification technique for a speaker and to achieve a better tradeoff between the precision and the complexity of the identification technique for a speaker a sophisticate algorithm is required so in our system we have decided to develop one algorithm for full proof system.

IPR APPLICATION / PATENT NO. – 201921013820

CIPCIS 2020: P-119

System For Identification Of Indian Classical Musical Instrument Sounds Using Audio Descriptors

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ABSTRACT-

The proposed system will be designed to overcome the shortfalls /gaps of the currently available systems. For the system to be developed, the problem statement is Recognition Technique for Identification of Indian Classical Musical Instrument Sounds using Audio Descriptors. In this system, an audio sample of musical instrument is taken as input to the system. Then different features are extracted using audio descriptors. Then the extracted features are classified using Audio Descriptors. Different classification techniques are statistical synthesis, machine learning, supervised learning, and unsupervised learning. By using proper classification techniques, Musical Instrument from North Indian Classical Music will be identified. Proposed System deals with three steps viz, Pre-processing of musical instruments sound samples, Extraction of audio features from sound samples and Classification. In feature extraction technique FT, STFT, LPC, PLP, MFCC, MIR toolbox & audio descriptors are adopted for accurate recognition.

IPR APPLICATION / PATENT NO. – 2019210138114

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P- 120

A method and Composition for purification of textile waste-water by acid doped polyaniline (pani)

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⁴Symbiosis Center of Research and Innovation(SCRI), Symbiosis International (Deemed University) (SIU), Maharashtra, India, head_ipr@siu.edu.in, Contact8999866313

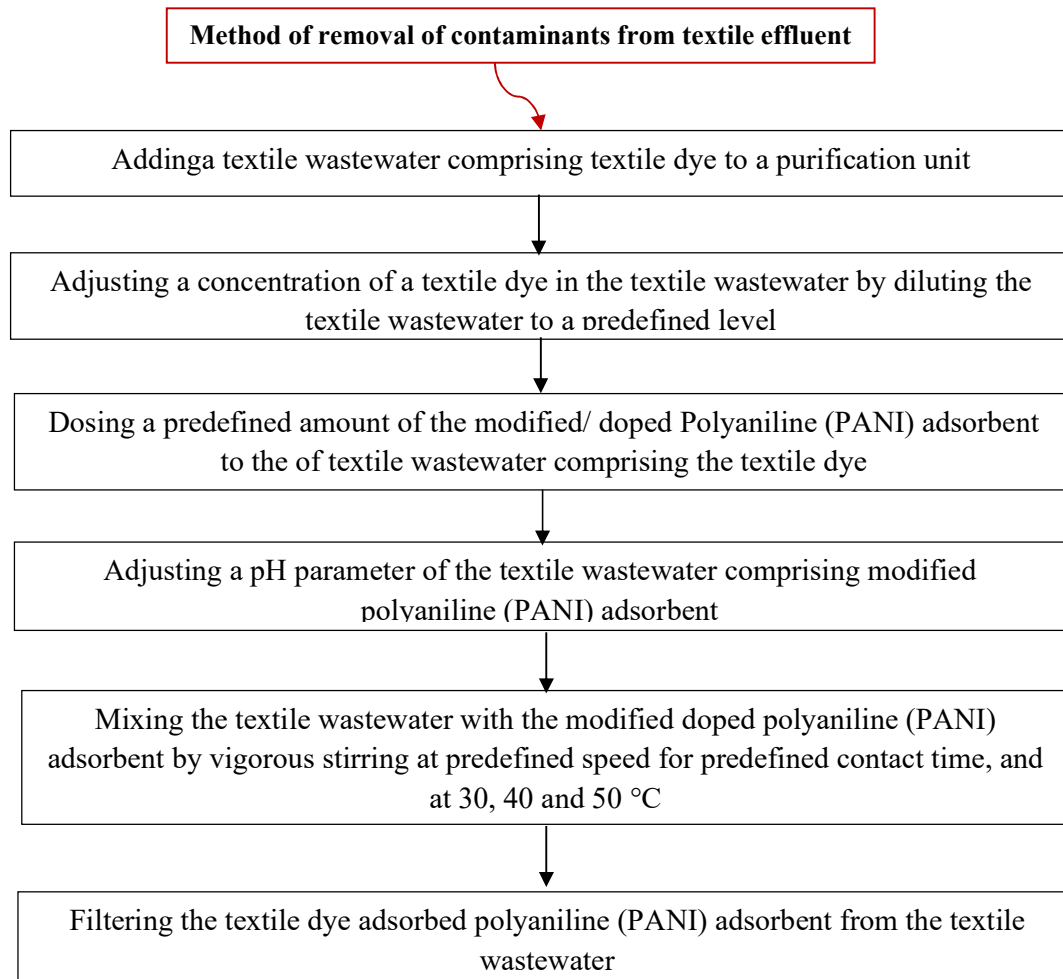
ABSTRACT-The present invention relates to a method of purification of textile wastewater effluent by adsorbing a textile dye over a surface of a modified adsorbent. The modified adsorbent in this case is a modified polyaniline (PANI) adsorbent. wherein the acid doped polyaniline (PANI) polymer may be synthesized by a chemical polymerization using ammonium persulphate as oxidant agent and oxalic acid (OA) as dopant and can be employed for the eradication of toxic azo dyes from textile effluent. The method may comprise various steps such as adding of the textile wastewater, adjusting the concentration of textile dye in the textile wastewater by dilution, dosing of the modified acid doped polyaniline adsorbent, adjusting pH parameter above or below a predefined point zero charge (pHpzc) value based on an ionic character of dye, mixing the modified polyaniline (PANI) adsorbent at the predefined contact time, temperature and speed, and filtering the textile dye adsorbed polyaniline adsorbent from the textile wastewater, thereby eradicating the textile dye from the textile wastewater to obtain a purified textile wastewater effluent. The modified polyaniline (PANI) adsorbent is optimized by adjusting ionic charge over the surface of the by adjusting the pH value above and below a point zero charge value, wherein the point zero charge value is 4.8. The present study investigates the removal of anionic azo dye methyl orange (MO) and cationic azo dye Basic red 46 (BR-46) using synthesized doped polyaniline (PANI). Based on the experimentations, it was observed that oxalic acid (OA) doped modified polyaniline (PANI) adsorbent was successfully employed for the elimination of anionic azo dye Methyl Orange (MO) and cationic azo dye Basic red 46 (BR 46) from aqueous solutions. About 92 % of adsorption was shown by doped PANI for MO and 93 % for BR 46. The results obtained from batch studies were analysed using Langmuir and Freundlich isotherm models. Langmuir isotherm was found to be best fitted to the experimental data with high values of R^2 . Thermodynamic investigations showed that the adsorption process was feasible and spontaneous at all the studied temperatures i.e., 30, 40 and 50 °C supported by the negative values of free energy (ΔG°), while the positive values of enthalpy (ΔH°) and entropy (ΔS°) signified the endothermic nature and enhanced the randomness of the process, respectively. Kinetic experiments affirmed the participation of pseudo-second-order rate kinetics for the MO-PANI and BR46-PANI systems. Based on the observed results, we can conclude that OA doped PANI was an excellent adsorbent to eliminate anionic dye (MO) and cationic dye (BR 46) from wastewater. The present method of water purification using the novel adsorbent is a simple, efficient and cost-effective alternative to existing techniques such as using expensive activated charcoal. Also, utilization of the modified adsorbent can act as a single point solution for the removal of cationic as well as the anionic dye from the textile wastewater.



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DIAGRAM/SCHEMATIC –



IPR Acknowledgement / Grant Certificate – Patent is filed and Published by Indian Patent Application No. **IN202021025428** is published on 28.08.2020 by Indian Patent Office (Mumbai Branch)



CIPCIS 2020: P- 121

Economic And Efficient Curing of Column Using Curing Pad

A.B. KUDOLI, A. KOTKAR. A. MALI, R. MARNE, K. NAURVEKAR

ABSTRACT-This paper deals with advanced curing technique for columns thus replacing the conventional method of using gunny bags and pipe watering for curing and thus economizing the curing on the construction site. Curing pads are made up of materials that can retain water in them and help to control evaporation of water from the structure thus controlling losses and thus saving the amount of water and also the labor cost to some extent. Also, it focuses on reducing the difference between the results of compressive strength obtained on site and those obtained in laboratory by curing the blocks in water tank (immersed curing). Near about 15% and 10% increase in compressive strength in grade 20, 25 and 30 has been observed for immersed curing and pad curing respectively, w.r.t environmental curing. About 2 times less amount of water is required for curing by using curing pad as compared to that of conventional practice of curing

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



IPR Acknowledgement / Grant Certificate – Here author has to attach his / her IPR scan /image of Acknowledgement /Grant Certificate **201921017076**



CIPCIS 2020: P- 122

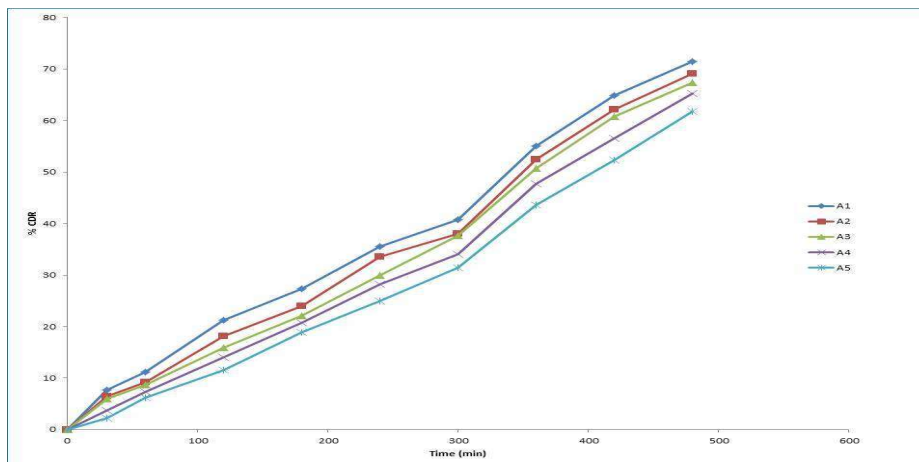
A Stable Pharmaceutical Composition for Transdermal Drug Delivery

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ABSTRACT- The present invention provides a stable composition for transdermal drug delivery comprising of verapamil and its acceptable salts or derivatives, Cassia fistula gum, penetration enhancers, and pharmaceutically acceptable excipients. The present invention also provides a method of manufacturing a stable transdermal patch/film. Furthermore, the present invention provides a method of improving bioavailability and/or reducing dose or dosing frequency of Verapamil Hydrochloride enduring first pass metabolism.

DIAGRAM / SCHEMATIC –



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CIPCIS 2020: P- 123

Water Bottle With Storage Container

Arti Avinash Tekade¹, Vijayalaxmi Kumbhar², Maithili Andhare³

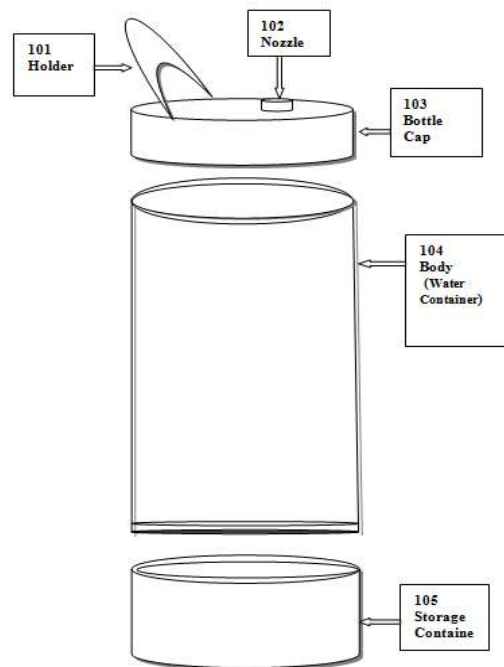
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ABSTRACT- This innovation is relates to the advancement in water bottle by Providing multipurpose storage container at the bottom of bottle. Most of the time when we going to office or for journey , we will generally carry water bottle with us, if there is a provision of storage container with bottle , A person can keep their medicines or any other important stuff in the container priory and it is automatically carry out with the Bottle. The said systems can also be used at any places for convenient use. Moreover it is hassle free. , the storage container provided at the bottom of bottle is easily removable.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – Here author has to attach his / her IPR scan /image of Acknowledgement /Grant Certificate - 201921052362



CIPCIS 2020: P- 124

Multipurpose Hairbelt for Hairstyle

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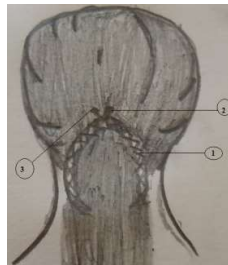
⁵Lab assistant. Department of E&TC Engg., PCCOER, Ravet, (MS) India, dipali.dhake@pccoer.in, 8600268810

ABSTRACT- This innovation is based on the hair belt which is used for multipurpose. Multipurpose hair belt is well handy accessory used for hair. Multipurpose hair belt made by metal channel design having curvature end point of both side of hair belt. Due to channel design of hair belt, minimize the size of belt is possible. After pressing it, it become banana clutcher. Then to tie all hair, cross both end of belt and hang it. So it is more convenient to change hairstyle without carrying two different hair accessories.

DIAGRAM / SCHEMATIC –



1 : Front view of hair belt, 2 : Design of metal hair belt



1 : Hair Banana clutcher , 2 : End point of Right side of hair belt or hair clutcher, 3 : End point of Left side of hair belt or hair clutcher.

IPR Acknowledgement / Grant Certificate – 201921052215



CIPCIS 2020: P- 125

A Method for Removal of Dye from Waste Water using Natural Adsorbent

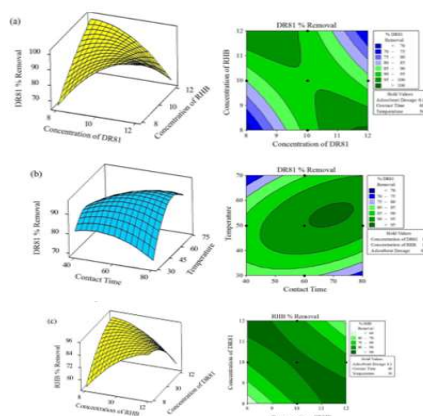
Shraddha Khamparia¹, Dipika Jaspal²

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ABSTRACT-Water is the most the important natural resource which has been continuously deteriorated by numerous point and non-point sources. Textile Industry is one of the largest consumers of water required for the different processes involved and its effluent contains a large number of toxic dyes which are not only hazardous to the aquatic system but also to flora, fauna, and humans. Hence its effective management has become the primary focus of all the stakeholders. Keeping the concept of Sustainability in mind, the objective could be achieved by recycling and reusing wastewater generated from industries. After an exhaustive literature review, it was found that adsorption is the most appropriate technique for the removal of contaminated water. The literature highlighted that much study has not been done for a mixture of different types of dyes by researchers. The innovation aims to fulfill this gap by applying natural adsorbent (widely available weed), natural material for a mixture of different types of dyes. The current innovation focuses on two important aspects i.e. (i) use of natural adsorbents for removal of dyes from wastewater and (ii) complex mixture of dyes. Since the effluent is a complex mixture of different types of dyes, it becomes difficult to eliminate these dyes. Deoiled *Argemone Mexicana* seeds, which is a weed, were explored for their decolorization potential for a binary mixture of different types of dyes (Direct Red 81 and Rhodamine B). A method has been developed to remove dyes from a simulated admixture of dyes using *Argemone Mexicana* seeds. Different parameters such as pH, contact time, temperature, and adsorbent dosage were studied to develop a method for effective removal of dyes with the use of *Argemone Mexicana*. Significant parameters affecting the method were evaluated using Central Composite Design (CCD) and Response Surface Methodology (RSM). The above natural adsorbent was exposed to the binary admixture of dyes resulting in achieving maximum removal of dyes from the aqueous solution of dyes by adjusting one or more parameters including pH, contact time, and at an optimum predetermined range. The method encompassing utilization of Deoiled *Argemone Mexicana* seeds is a sustainable approach to treat wastewater using natural adsorbent. Treated water could be reused in the textile industry or some other domestic purposes solving the problem of water scarcity all over the globe.

DIAGRAM/SCHEMATIC –



IPR Acknowledgement / Grant Certificate – Indian Patent Application No.: 201721007665
Filed on: 03/03/2017 Applicant: Symbiosis International University Our Ref: PT994



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CIPCIS 2020: P- 126

Nanotechnology-Based Drug Delivery Systems and Herbal Medicines

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ABSTRACT- The present invention relates to a novel composition of Nanotechnology-Based Drug Delivery Systems i.e. Liquorice (*Glycyrrhiza glabra*), Manjishta (*Rubia cordifolia*), Tulsi (*Ocimum sanctum*), Jayphala (*Myristica fragrans*), Nagkesar (*Mesua ferrea*) and sesame oil. More specifically it relates to the field of method of preparation of topical dosage form based on nano technology having therapeutic properties. Further more specifically, it relates to Nanotechnology-Based Drug Delivery Systems based topical synergistic herbal formulations which are effective against wrinkle and other skin disorder, along with process for the preparation of the same in pharmaceutical acceptable dosage forms.

IPR Acknowledgement / Grant Certificate –

**For the publication of his invention in the patent office journal number – 48/2020 Dated -
27/11/2020 Page number - 59592**

http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929_1/Part-1.pdf



CIPCIS 2020: P- 127

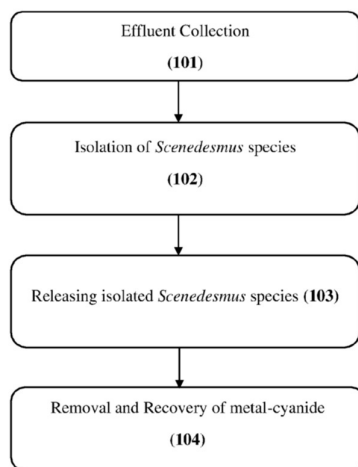
Process for Removal and Recovery of Copper-cyanide complex using Microalgae

Yogesh Patil

Symbiosis Centre for Research and Innovation, Symbiosis International (Deemed University), Pune, Maharashtra, India
Mail ID: head_respun@siu.edu.in, Contact: 9970225309

ABSTRACT- A process of removal and recovery of metal-cyanide complex from effluents is disclosed. The process includes isolating a species of *Scenedesmus* via enrichment culture technique in alkaline medium. The process further includes releasing the species of *Scenedesmus*, after being isolated, in the effluents at predetermined conditions including a predefined pH and a predefined temperature. The species of *Scenedesmus* released in the effluents at the predetermined conditions: degrades cyanide moiety of a metal-cyanide present in the effluents and releases the metal ions; utilizes the carbon and nitrogen from the cyanide or metal cyanide complex present in the effluents; accumulates a first fraction of metal ions from the solution; and bio-sorbs the second fraction of the metal ions onto the cells of the microalgae thereby resulting in the removal of both the cyanide and the metal from the effluents. The metal-cyanide complexes comprise at least one of a copper-cyanide and a zinc-cyanide.

DIAGRAM/SCHEMATIC – Schematic diagram of metal-cyanide process



IPR Acknowledgement / Grant Certificate – The Indian Patent Granted (Patent No. 343229; Application No. 201721007663; Date of Filing: 03/03/2017)

The Indian Patent Office Journal No. 08/2019 Dated 22/02/2019; Application No. 201721007663 A, Publication date: 22/02/2019

WIPO/PCT International Publication No. WO 2018/158752 A1 Dated 07/09/2018

US Patent Application Publication No. US 2020/0002204 A1, Jan. 2, 2020

The Patent has also been filed in Russia, China and Japan.



CIPCIS 2020: P- 128

Dynamic Traffic Detection and Vehicle Classification Using Piezoelectric Sensor

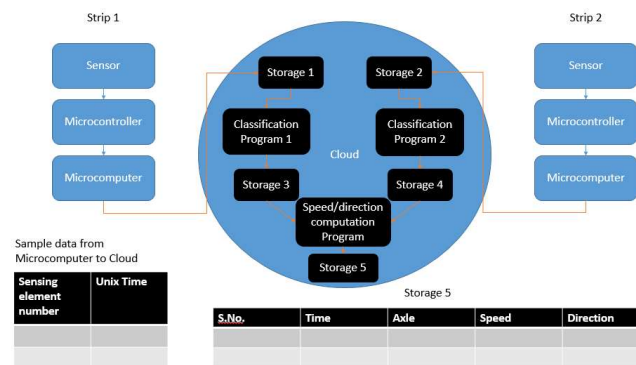
Srivathsan Rengaraj1, Vedhaviyas Gopalakrishnan2

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ABSTRACT- Traffic detection and classification systems find various applications such as in dynamic traffic control systems, data collection for infrastructure projects, toll booths and parking spaces. Existing systems such as Induction Loop Detectors, cameras, pneumatic tubes, infrared, ultrasonic sensors, other weight in motion sensors have at least one of the following limitations such as susceptibility to bad visibility conditions, limited lane coverage, tedious installation process, limited vehicle information to name a few. The present invention describes a novel method of vehicle detection and classification in real time using piezoelectric sensors. The system consists of two parallel strips (each enclosing an array of piezoelectric sensors) placed over a lane of the road, over which the movement of vehicles is to be monitored. The strips cause no obstruction to the passage of the vehicles. The sensors can detect the passage of vehicles when the tires of the vehicle pass over them. The sensors are connected to a microcontroller, and the micro-controller is in turn connected to a microcomputer. The microcontroller registers the location of contact of the tire on the strip of sensors and sends it to the microcomputer. The microcomputer appends time to this data and uploads it to the cloud. On the cloud, the vehicle classification is done, which computes the number of axles and time of passage of vehicles. Data from both the strips are used to compute the direction of passage and speed of the vehicle. The entire above stated process occurs in parallel to the passage of the vehicle over the strips. A single strip is sufficient to classify vehicles. However, two strips are required to compute speed of the vehicle. The system is capable of classifying two wheelers, passenger cars and multi-axle vehicles. In addition to this, the system is also capable of classifying data as miscellaneous. The system can be installed over the road, can be made to span the road as per width requirement along with variations in sensing elements and sensors, the system can be remotely monitored, configured and data can be accessed from the cloud. The system upon installation resembles a small speed bump thus blending with the road.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – 2018410100021



CIPCIS 2020: P- 129

Identification of New Compounds Aurantiamide Acetate from Phyllanthus Amarus and Peonidine 3-O-Sophoroside - 5-O Glucoside from Hibiscus Rosa- Sinensis

Dr. Nagore Dheeraj, Gandhi Sejal Prakash, Nanda Rabindra Kumar, Chitlange Sohan S.

Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune
411018 Maharashtra, India.

ABSTRACT- The present invention relates to new chemical compounds isolated and purified from herbal medicines. Particularly, it relates to two previously unknown compounds which are aurantiamide acetate from Phyllanthus amarus and Peonidine 3-O-Sophoroside -5-O glucoside from Hibiscus rosa-sinensis.

IPR Acknowledgement / Grant Certificate –

For the publication of his invention in the patent office journal

number – 48/2020 Dated - 27/11/2020 Page number – 59591

http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929

[1/Part-1.pdf](#)



CIPCIS 2020: P-130

Enclosure Barrel Casing for Household Broom

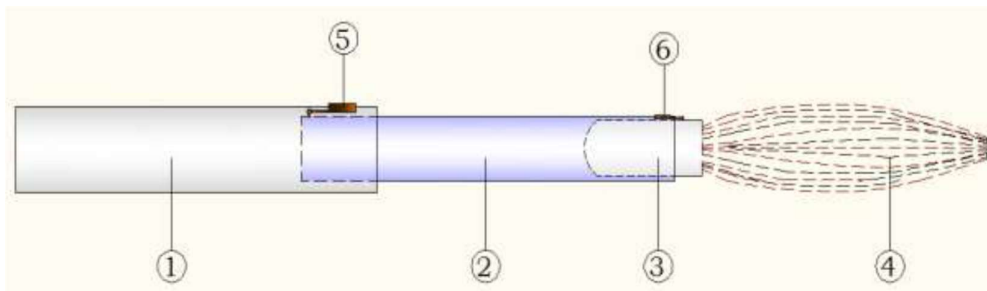
Shubham Jagannath Jadhav, Jyoti Jagannath Jadhav

Flat No. 604, Devrai Phase-2, Sr. No. 82/P, Near Bapdev Chowk, Kiwale, Tal.- Haveli, Pune – 412101, Maharashtra, India

ABSTRACT-

This innovation is based on providing a sliding type enclosure in which when broom slides out then uncover the broom fibers and broom is ready to sweep the floor, but when broom slides into the enclosure then it encloses broom fibers completely into it which protect it from any damage or bending due to long time storage against it, also this enclosure prevent the housefly to get attracted to the broom fibers is dirt is stick to it if any, thus this type of enclosure used to enhance the life of the broom during operation, and long time storage as well as during transportation, at the same time when broom enclosure operates through its telescopic enclosure arrangement then the length of broom extends to the extend so that it can be used for cleaning the ceiling, which make it multi-purposed household broom.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821035557

CIPCIS 2020: P-131

Fixed Amount Dispenser for Deformable Tube Packed Semi-solid Material

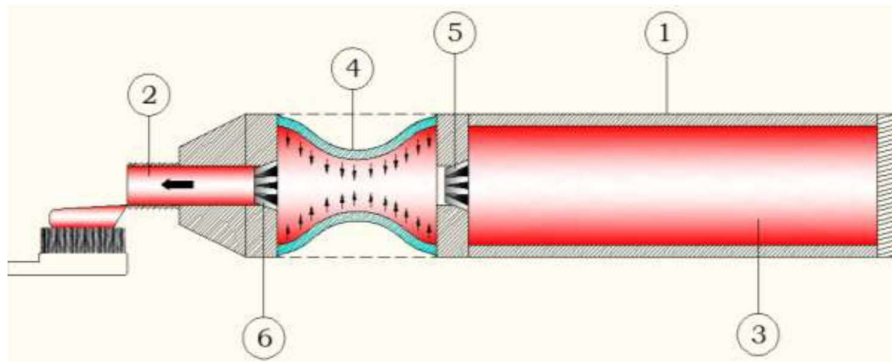
Sayali Nitin Mane, Nitin Vishwasrao Mane

Flat No. 604, Devrai Phase-2, Sr. No. 82/P, Near Bapdev Chowk, Kiwale, Tal.- Haveli, Pune – 412101, Maharashtra, India

ABSTRACT-

This innovation is based on providing fixed amount toothpaste dispenser using flexible squeezer and one way valve, when the pressure applied at squeezer it pushes out toothpaste to nozzle through one way valve at nozzle and when the pressure removed from squeezer, due to its elastic nature it regain its original volume and shape causes negative pressure at squeezer result in suction of toothpaste from tube through one way valve at tube, thus each time when squeezer experience pressure it dispenses the same amount of toothpaste.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921003632



CIPCIS 2020: P-132

Helicopter Pilot Flight Training Simulation Mechanism

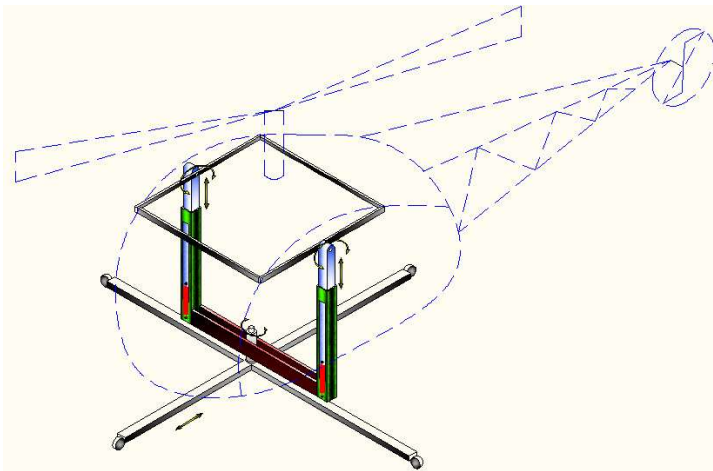
Pradip Shivaji Mohite, Padmavati Pradip Mohite

At./Po. – Wangi, Tal. – Kadegaon, Dist. - Sangli, PIN – 415305, Maharashtra, India.

ABSTRACT-

This innovation is based on providing a mechanism for actual experience of the helicopter flight training simulation, this allows to experience the actual flight and corresponding responses of the system during the flight of the helicopter, this mechanism shorten the time of training as it allows pilot to operate the helicopter in actual conditions and make the decision accordingly, this mechanism allows pilot to lift the helicopter upto three feet and can rotate 360 degree and can swing up and down and the complete assembly can moves on ground, thus this mechanism is allows pilot to experience the actual working conditions and responses which shorten the learning time and hands-on training.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821027872



CIPCIS 2020: P-133

Cable Operated Pull Down Type Swashplate Assembly with Nylon Fiber Ball for Helicopters

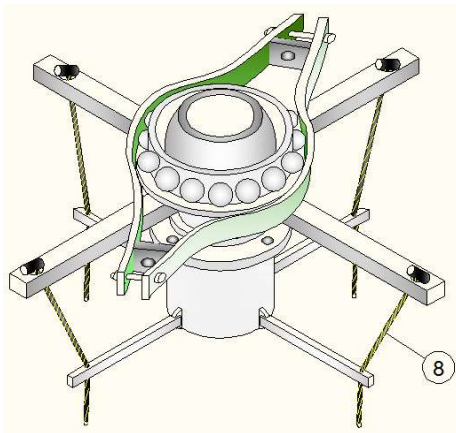
Pradip Shivaji Mohite, Padmavati Pradip Mohite

At./Po. – Wangi, Tal. – Kadegaon, Dist. - Sangli, PIN – 415305, Maharashtra, India.

ABSTRACT-

This innovation is based on providing a rotor swashplate assembly wherein the swashplate is supported over the nylon fiber ball for tilting which ensure less maintenance and wear of the matching parts, and its tilting is achieved by using pull down type application of force which is assisted by gravity, thus push up type actuation is eliminated, the flexible link, the wire rope cable is used instead of rigid rod link, to actuate the swashplate tilting, this given better smooth actuation, allows misalignment and most important given more stronger link operation conditions, this also help in easy replacement of the link with minimum maintenance.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821027873



CIPCIS 2020: P-134

Reversible and Secure Watermarking Using Cryptography on Permuted Digital Media

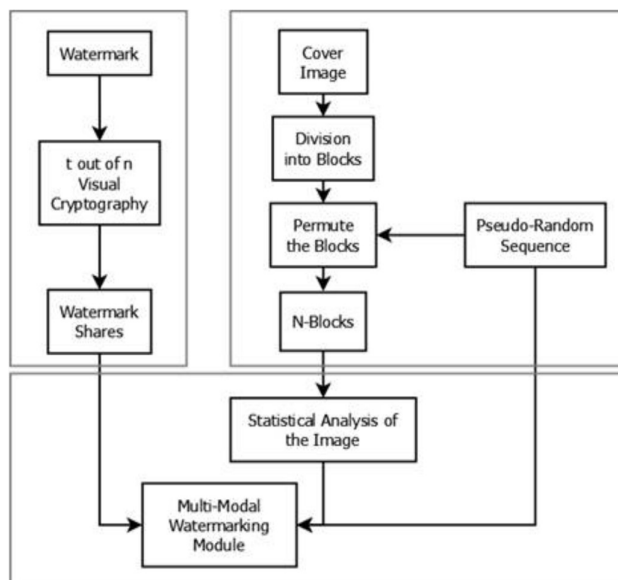
Dr. Reena Gunjan

MIT, Loni Kalbhor, Rajbaug, Pune, Maharashtra, India

ABSTRACT-

With the rapid development of technology, the digital information revolution has caused significant changes in the society but major challenges have opened due to the multimedia data being available in digital form which can be now be easily copied, manipulated and distributed by the use of versatile software and thus the perfect reproduction of digital data has caused a need for protection of ownership rights under this the copyright protection of digital data has become an important research issue, the digital watermarking has emerged as a method to authenticate document ownership and to identify illegal copies of a document, the same is achieved by inserting a unique digital watermark into each copy of the multimedia content to identify the owner and prevent piracy also if a person sells unauthorized copies of the watermarked content, then these illegal copies can be traced using a watermark extraction and detection algorithm, thus the said invention provide a robust digital watermarking scheme by pre-processing the watermark and embedding it into an image.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821030063



CIPCIS 2020: P-135

Disk cleaning and automatic disk cooling mechanism with color coded wear measurement technique in Disk pads

Vivekanand Naikwadi ¹, Dr T.R.Shinde ²

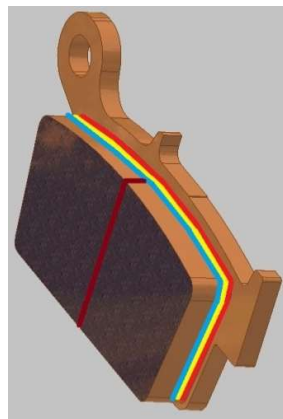
¹Pune University, Maharashtra , India , naikwadivivek@gmail.com, 9970226802

¹Pune University, Maharashtra , India , tarangshinde@gmail.com, 9822625745

ABSTRACT-

This invention discloses the unique technique describing the wear factor associated with disk pad. Every friction pad of a disc is given a Particular paint on lower end of disk pad device in operation. Once the pad is worn to beyond an allowable wear limit thereby causing a warning color getting highlighted and the disk to be lit with that color and indicating the operator that disk pad is worn out and needs replacement, various depth gauges and sensor based devices are innovated till date, but this invention work utilize easy methodology and any one can detect the wear rate of disk pad promptly. The middle layer of self cleaning mechanism will keep the disk free from debris and cool down disk rapidly. It is associate degree object of the current invention to beat the on top of delineate difficulties incidental the acknowledged art and to produce, in an exceedingly disc brake of the moment category, a wear alarm system of extremely reliable operation.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921041362



CIPCIS 2020: P-136

Innovative steering mechanism in modern vehicles for after parking straight wheel alignment

Vivekanand Naikwadi ¹, Amit Dusane ²

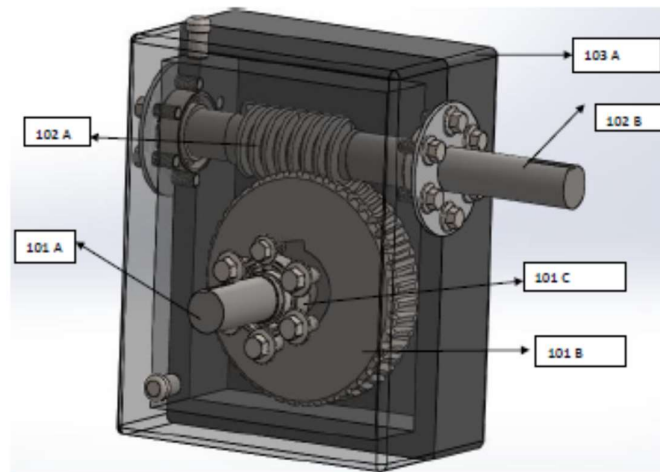
¹Pune University, Maharashtra , India , naikwadivivek@gmail.com, 9970226802

¹Pune University, Maharashtra , India , dusaneamit@gmail.com 7507351696.

ABSTRACT-

The present invention relates to Innovative steering mechanism in modern vehicles for after parking straight wheel alignment, for several years, analysis has been conducted into causes of, and remedies for traditional wheel alignment method but there is very little focus on the stresses on tyres when vehicle is parked or in standalone condition ,we know that when vehicle is parked with wheel turn in definite angle can produce ill effect on center of gravity of vehicle and stresses can be excecates leading to form misalignment. Over the years ,parking the car having the wheels in straight direction is known phenomenon but present invention will help to automates this characteristics using various mechanisms.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921025313



CIPCIS 2020: P-137

Design and development of modified seatbelt mechanism for pregnant women passenger

Vivekanand Naikwadi ¹, Amit Dusane ²

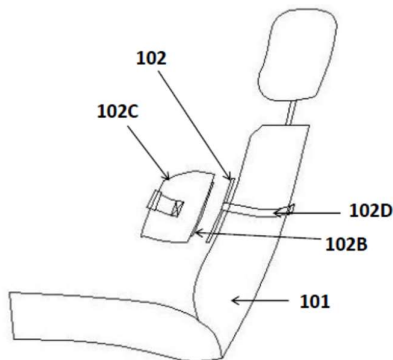
¹Pune University, Maharashtra , India , naikwadivivek@gmail.com, 9970226802

¹Pune University, Maharashtra , India , dusaneamit@gmail.com 7507351696.

ABSTRACT-

Design and development of modified seatbelt mechanism for pregnant women passenger is disclosed for use with a vehicle seat which includes a one point attachment system forming a lap belt, a shoulder belt and further includes a chest belt and a magnetic stress relief mechanism. The belt system includes a presenter mechanism to move the clasp for the one point portion of the system into an easy to reach position to encourage seatbelt usage. The system includes generally consist of one buckle on opposite sides of the seat with a release mechanism provided to automatically release buckle upon the release of the other buckle regardless of which is first manually released, the modern seatbelt assembly makes an uncomfortable attachment for pregnant women passenger traveling in car because focal point for dampening external kinetic energy effect generated in sudden braking or accidental scenario can generate severe ill effect on womb of pregnant women passenger due to jerk from kinetic energy and may leads to health complication during pregnancy.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821041617



CIPCIS 2020: P-138

Design and Development of Car Seat Constrainer System

Vivekanand Naikwadi ¹, Nitin Chopra ²

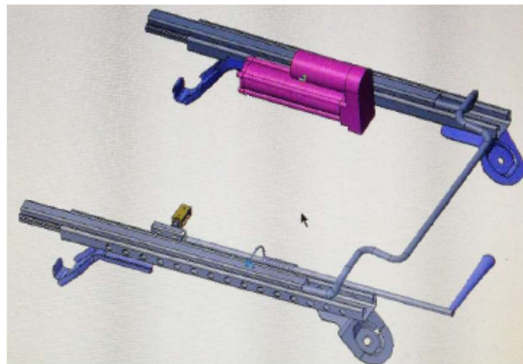
¹Pune University, Maharashtra, India, naikwadivivek@gmail.com, 9970226802

¹Pune University, Maharashtra, India, chopranitin@gmail.com 9049690569

ABSTRACT-

A conventional car seat which is only adjustable in forward and the reverse movement by being fixed on the floor, is a convenient way for adjusting the distance between the pedals and the seat. Be that as it may, likewise, this can be perilous if the same is performed while the vehicle is mobile, as it would distract the driver to adjust the position of the seat rather than driving. In view of the foregoing, an object of the present invention is to provide a locking mechanism to prevent the driver from adjusting the position whilst the vehicle is in motion, to prevent any hazards that can take place due to the lack of focus of driver.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201821020932



Pimpri Chinchwad Education Trust's
PIMPRI CHINCHWAD COLLEGE OF ENGINEERING AND RESEARCH,
Laxminagar, Ravet, Pune-412101 (Maharashtra)
**CONFERENCE ON IPR, PATENTS, COPYRIGHTS,
INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-139

Conveniently Unfolding Of Laptop

Nolesh Premraj Warke , Akshay Dadasaheb Ranpise

Department of Computer Engg., PCCOER, Ravet, (MS) India

ABSTRACT

According to this invention, there is a mechanism provided for unfolding the laptop in a comfortable manner, usually when people unfold their laptops frequently their fingers are been touched to the web cam on the display casing, to overcome this, this mechanism is used, it helps to open the laptop by applying the opposite forces on the plates, it is the mechanism which makes it easy for unfolding the laptop due to the plate fixed in the casings, the plates are long lasting due to they are being fixed into the casings.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621027637



CIPCIS 2020: P-140

Switch Module For Efficient Mobile Charging

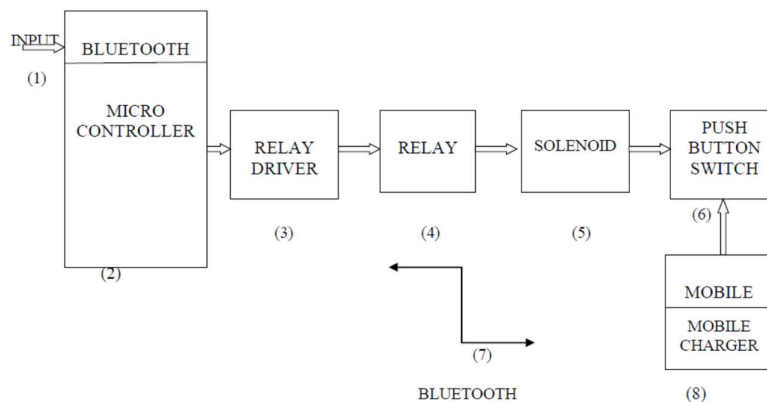
Arati Tekade

Asst. Prof. Department of E&TC Engg.,PCCOER, Ravet, (MS) India arati.tekade@pccoer.in, 9545452766

ABSTRACT

Mobile and many other electronic gadgets have become an integral part of human life. Many times when mobile is connected to charger, even after 100% charging of battery, we forgot to switch off the button of mains supply and so battery gets continuous power supply which will ultimately lead to reduced life of battery over the years. Moreover, sometimes we connect the mobile to the charger and forgot to switch-on the button so the mobile does not get charged, which leads to irritation. So the designed system automatically OFF the switch of main supply when the mobile battery is 100% charged or ON the switch of main supply when battery is less than 100% charged, So this electronic arrangement provide automatic ON/OFF the switch of main supply so that mobile battery will be efficiently charged and also save electricity. A Sophisticated software application is designed which will On successful acknowledgement of the command, turns OFF the Bluetooth module of smart phone

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO.– 201721016767



CIPCIS 2020: P-141

Induction of An Extra Oxygen In The Engine To Reduce Ignition Lag With Increase In Power & Reduction In Air Pollution

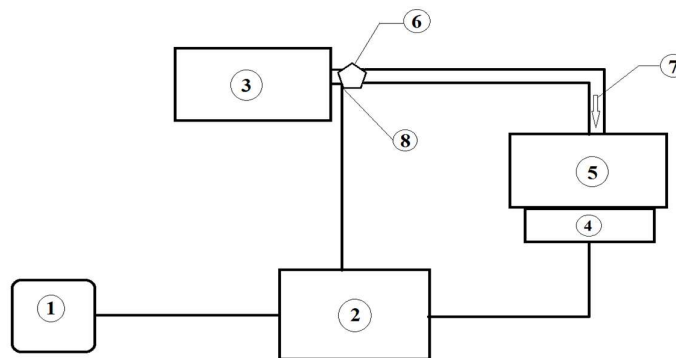
Indrajeet Rajendra Khandait

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT

A system for producing more power in the engine of the heavy vehicles whenever needed, the said system uses oxygen cylinder, electronic control unit, crankshaft position sensor and one pushbutton switch, said pushbutton switch required to be mounted on the dash board of the vehicle, said switch is connected to the electronic control unit, said unit is middle and the main part of the system, which is also connected with the oxygen cylinder tap to control the flow of pure oxygen and to the crankshaft position sensor, as the pushbutton switch is pressed manually, system gets active, crankshaft position sensor finds the exact middle of the swept volume and sends the signal to control unit, inlet valve gets closed at the exact middle of the suction stroke, as soon as control unit gets the signal control unit opens the supply of oxygen from oxygen cylinder to the combustion chamber, as a driver of the heavy vehicle; you just need to press the pushbutton switch when the vehicle is on the elevation of road, it will automatically increase the acceleration of the vehicle and as soon as elevation road ends just need to press the pushbutton switch again for normal power production, the overall cost for installing this system is nominal for heavy vehicles.

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO.– 201621025367



CIPCIS 2020: P-142

Multi Function Pen Consisting Of Inbuilt Paper, Advanced Punching System, Advanced Stapler, Glue

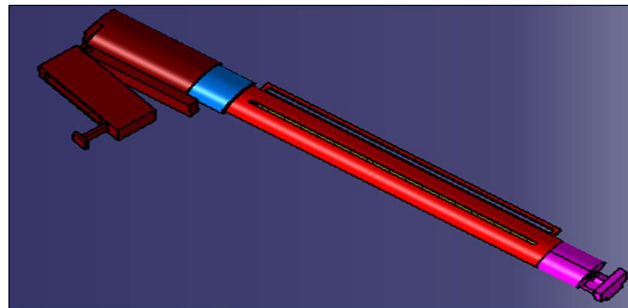
Shrenik Jain , Vinayak Endgallu

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT

A product, consist of a pen which contains a multi-functioning such as stapler which is mounted on the cap of the body of a pen the said combination also have a punching system which is mounted on the push button of the pen, the said combination also have paper rill mounted on the refill casing on the upper side while a glue is mounted on the lower part of refill casing, the said combination also have a refill inserted inside the refill mounting, the said combination have rubber bush inserted on the lower outer pen body by which the person is comfortable while using it and the product overall dimension is 150mm*10.5mm approximately also its total cost for manufacturing is affordable to everybody.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621025532

CIPCIS 2020: P-143

A Protective Film for Helmet Visor Which Is Water Repellent And Detachable

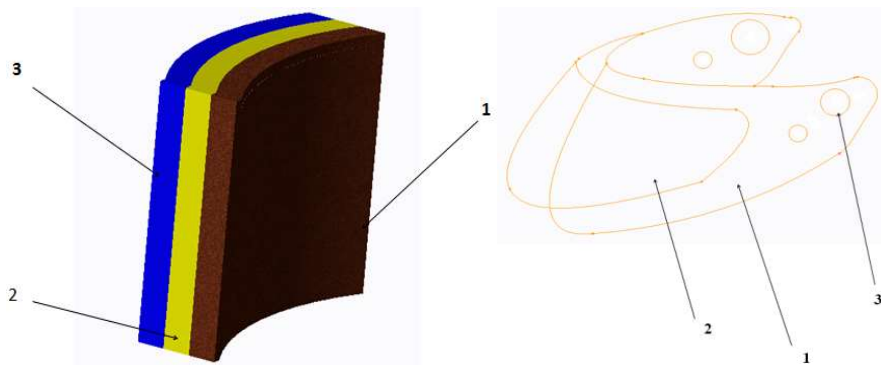
Omkar Hanumant Shinde

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT

The invention relates to a visor film suitable for a helmet having an adhesive detachable protective film made up of a transparent plastic type material, mainly PET (polyethylene terephthalate) and TPU (thermoplastic polyurethane). The invention can also be used by an addition of an UV protection layer on the film, the film is photo chromatic on the outer surface and has UV stabilizing additives which are capable of responding to the sun light and UV light. The invention will also have water repellent and dust repellent layer of Super hydrophobic and oleo phobic coating materials, which will repel most of the water and oil based liquids. The helmet can be suitable for driving a motorbike, for police or soldiers or in sports.

DIAGRAM / SCHEMATIC –



1 : relates to helmet visor, 2 : relates to detachable transparent adhesive film, 3 : relates to visor lock.

IPR APPLICATION / PATENT NO. – 201621025506



CIPCIS 2020: P-144

The Additional Control Unit (ACU) For Automated Speed Control In Required Zones

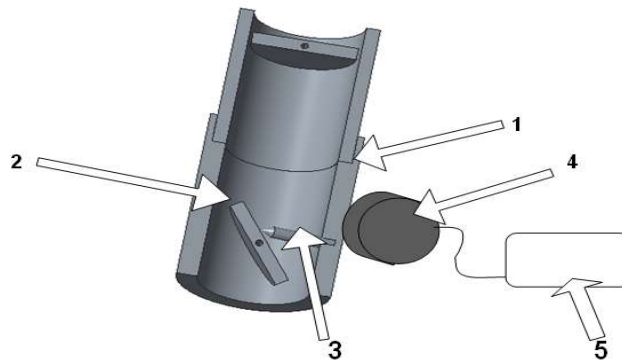
**Abel Mathew, Kartik Mundase, Ashwin Bhalerao, Ashish Maurya Kartik Kinge,
ShrutikaTakalkar, Shrikant Shetty**

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT

The system is for preventing accidents by controlling the speed of the vehicles by modifying the carburetor. The speed of a vehicle is controlled or governed by the throttle valve in the carburetor which in turns controls the air-fuel mixture. The throttle is controlled manually by the user, but in case of over speeding in restricted zones like schools, hospitals, sharp turns; the speed then, can be controlled by reducing the air fuel mixture supply to the engine which is a governing factor for vehicles speed. We can restrict the maximum speed of the vehicle by using our modification with the assistance of transmitter & receiver.

DIAGRAM / SCHEMATIC –



1 : relates to Outer Shell, 2 : relates to control valve, 3 : relates to control pin, 4 : relates to cam controller,
5 : relates to receiver device

IPR APPLICATION / PATENT NO.– 201621025537



CIPCIS 2020: P-145

Heart Rate Sensing Helmet for Safer Driving

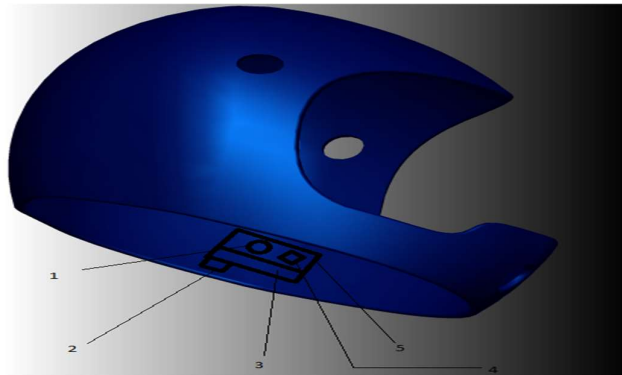
Shubham Suresh Poojary

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT

The system used to sense heart rate and start your vehicle (two wheeler) with the help of helmet. The said technology uses heart rate sensor, battery, Bluetooth (in speedometer and helmet). First we need to connect speedometer and helmet via Bluetooth, which is present in both. We need to start the connection by switching ON the vehicle (battery mode) and also by switching ON the switch present on the helmet's at one side chin (inner side). The connectivity can be established after LED on the Bluetooth symbol present on speedometer stops blinking (i.e. continuously ON mode). After connecting, the speedometer will receive the signal by the heart rate sensor present on helmet and then person can start the vehicle (ignition). The overall cost for installing this system is around 4000 rupees.

DIAGRAM / SCHEMATIC –



- 1 : Heart rate sensor, 2 : Charging Port, 3 : Lithium-ion Battery installed on Helmet,
4 : switch installed on the helmet, 5: whole component of system on helmet

IPR APPLICATION / PATENT NO. – 201621025788



CIPCIS 2020: P-146

Smart Slipper With Weight Sensor, Clock With Stop Watch, Weather Sensor And Bluetooth

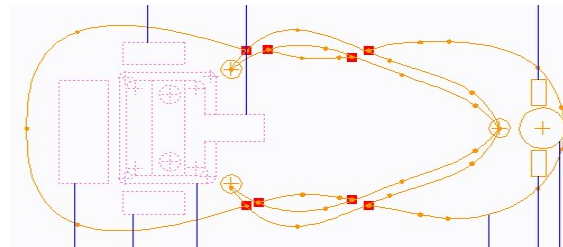
Priyanshu Kukkar

Department of E&TEngg., PCCOER, Ravet, (MS) India

ABSTRACT

A slipper - based weight measuring, watch with facility of stop watch, system comprising: a slipper, one or more weight sensitive detectors constructed and arranged with the slippers to sense weight of a person wearing the slippers and walking or standing, accessible using Bluetooth; a sensor to measure the weight of a person or body standing on sensor . There is also weather sensor is provided. From weight sensor the signals are transmitted to the digital display detector. On digital display we can see the weight of the body. For seeing the time there is additional display is provided. In slipper there is Bluetooth is available. The control of Bluetooth is connected to band. The band can be wear on hand. For water protection in addition we can use the silica layer as it protects the slipper from the any short circuit.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621026952



CIPCIS 2020: P-147

Sensor Operated Automatic Ink Stamping Machine

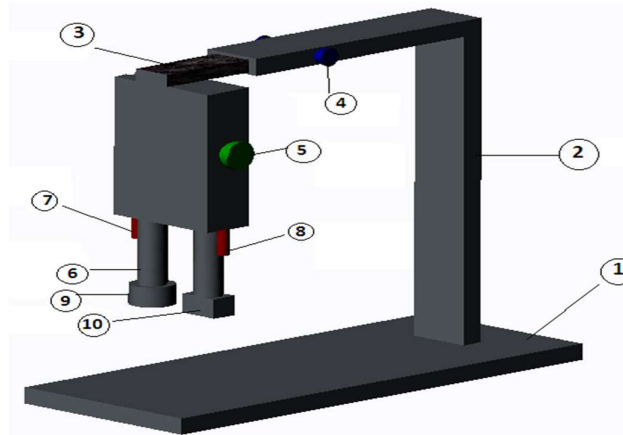
Jayashri V. Chopade

Asst. Prof. Department of Mechanical Engg., PCCOER, Ravet, (MS) India, jayashri.chopade@pccoer.in, 9545452766

ABSTRACT

For stamping, when paper comes below the plunger, on stand the slider can be moves forward or backward for correct position on paper. Sliding screw locks the slider at correct position. Paper sensor senses the paper and moves in downward direction for impression. Round stamp and rectangular stamp make the impression on paper. After two seconds, plunger moves upward direction. In this system instead of using two stamps, single stamp can be used. For ink, ink refill may use for continuous operation. Ink sensor is provided, to detect the ink for impression.

DIAGRAM / SCHEMATIC –



1 : relates to stand, 2 : relates to support, 3 : relates to slider, 4 : relates to slider screw,
5 : relates to locking screw, 6 : relates to plunger, 7 : relates to ink darkness sensor, 8 : relates to paper
sensor, 9 : relates to round stamp, 10 : relates to rectangular stamp

IPR APPLICATION / PATENT NO. – 201621026957



CIPCIS 2020: P-148

A System for Drinking Water Cooler to Reduce Water Wastage and Energy Conservation

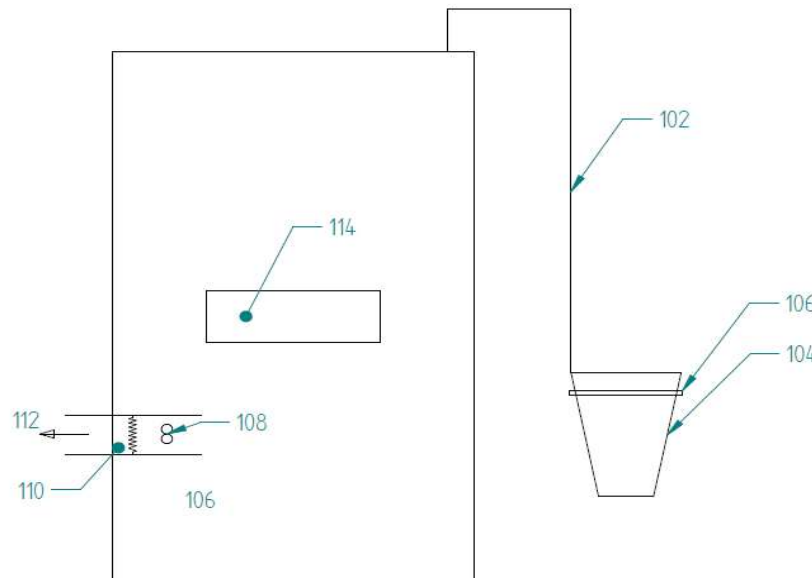
Harish Umashankar Tiwari, Amruta Harish Tiwari

Prof. & Principal, Pimpri Chinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT-

The present subject matter is a system for drinking water cooling with advancement to reduce the wastage of water and reduce the energy consumption. In the said system the means for drinking water is especial type of glass. The glass is an integral part of the system wherein the upper portion of the glass surface is corrugated type and pointed edges so that one does not touch it directly to mouth or lips. The water cooler is provided with a hot air stream for glass cleaning and hand cleaning. It results in saving of water otherwise required for glass cleaning and hand cleaning.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047772



CIPCIS 2020: P-149

A system for Weight Indicator in Seating Arrangement

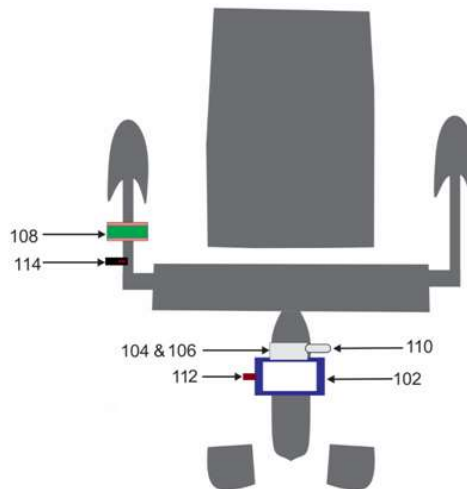
Harish Umashankar Tiwari, Amruta Harish Tiwari

Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT-

The present subject matter is a seating arrangement with advancement in chairs or seats. The seating arrangement is having a means for the measurement and display of weight of person seating on it. The conventional means which are used for the measurement and display of weight are used. The chairs or seats are modified to position the components of the weighing machines for this advancement. The load cell is positioned to sense the weight at appropriate position where the overall weight acts and the display is positioned suitably on chair or other location

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047773



CIPCIS 2020: P- 150

Gas Flow Measurement Tube

M.Shanmugaprakash¹, Karthik Rajendran², Manivel R³, Dr.G.L.Sathyamoorthy⁴

¹ Department of Biotechnology, Kumaraguru College of Technology, Coimbatore, Tamilnadu-641049. Email: shanmugaprakash.m.bt@kct.ac.in

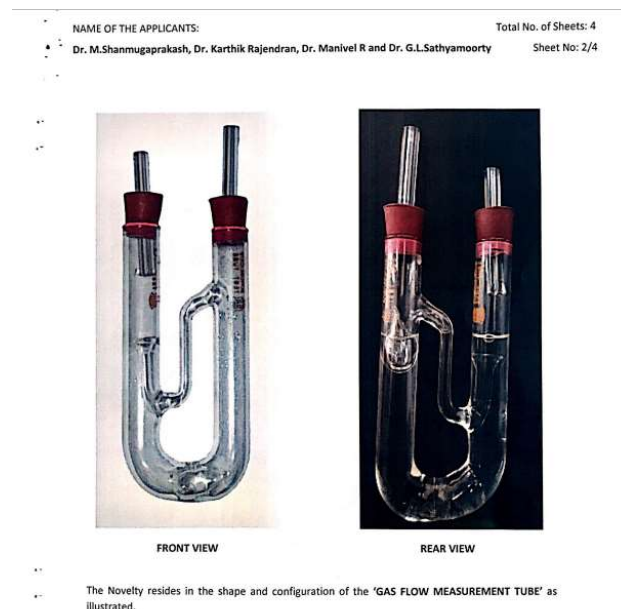
² Department of Environmental science, SRMAP University, Andrapradesh. Email: karthik.1988@gmail.com

³ Department of Mechanical Engineering, Kumaraguru College of Technology, Coimbatore, Tamilnadu-641049. Email: manivel.r.mec@kct.ac.in

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ABSTRACT- The proposed measuring device is used for measuring a gas flow by liquid displacement method. The measuring device comprises at least one inlet and one outlet gas flow and interconnected with special designed tube. By increasing gas pressure inlet tube, it displaces the equal amount of water in the U-shaped tube. Once the pressure reaches its threshold value, thereby releasing all of the accumulated gas on the gas inlet tube through a specially designed interconnected tube. Due to this action, water level rises on the outflow of the gas meter and a air-free closed glass bubble which floats on the water rises accordingly and then return back to its initial standby position for new receipt.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – Here author has to attach his / her IPR scan /image of Acknowledgement /Grant Certificate – 297724 – 21/09/2017



CIPCIS 2020: P- 151

Method of Preparation of Nano-Emulsion with its Anti-Aging Action

Dr. Sohan S. Chitlange, Dr. Dheeraj H. Nagore, Pooja F. Kauthale, Rakesh S. Shivatare

Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant
Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.

ABSTRACT- The present invention relates to a novel composition of Nanotechnology-Based Drug Delivery Systems i.e. Liquorice (*Glycyrrhiza glabra*), Manjishta (*Rubia cordifolia*), Tulsi (*Ocimum sanctum*), Jayphala (*Myristica fragrans*), Nagkesar (*Mesua ferrea*) and sesame oil. More specifically it relates to the field of method of preparation of topical dosage form based on nano technology having therapeutic properties. Further more specifically, it relates to Nanotechnology-Based Drug Delivery Systems based topical synergistic herbal formulations which are effective against wrinkle and other skin disorder, along with process for the preparation of the same in pharmaceutical acceptable dosage forms.

IPR Acknowledgement / Grant Certificate –

For the publication of his invention in the patent office journal

number – 48/2020 Dated - 27/11/2020 Page number - 59590

http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929

[1/Part-1.pdf](#)



CIPCIS 2020: P- 152

Methods and Process for the Biodegradable Nanoparticles of Bacopa Extract

Dr. Santosh S Bhujbal, Mr. Siddharth S. Dharmadhikari, Ms. Shradha B
Darade, Dr. Dheeraj H Nagore

Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant
Tukaram Nagar, Pimpri, Pune 411018 Maharashtra, India.

ABSTRACT- The present invention relates to methods and process of preparing biodegradable nanoparticles of Bacopa extract. In more particular, the present invention relates to characterization of biodegradable nanoparticles was done by particle size analysis, zeta potential, DSC, XRD and SEM studies.

IPR Acknowledgement / Grant Certificate –

For the publication of his invention in the patent office journal

number – 48/2020 Dated - 27/11/2020 Page number – 59586

http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4929

[1/Part-1.pdf](#)



CIPCIS 2020: P- 153

Aluminium Matrix Composite Reinforced with High Strength Tungsten Carbide and Fly ash & Preparation Method Thereof

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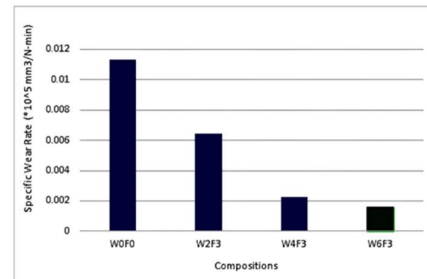
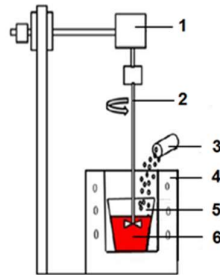
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ABSTRACT- The complete specification filled patent reveals the stir cast aluminum (Al 2014) with tungsten carbide (WC) and fly ash composites. The fabricated aluminum (Al 2014) with tungsten carbide (WC) and fly ash having improved mechanical and tribological properties such as tensile strength, wear, corrosion resistance and hardness for the versatile application in automotive and mechanical industries. Generally, aluminium alloys are widely used in automotive and structural applications. Automotive parts such as hub, gears, piston working effectively during running conditions and facing failures such as crack, wear, corrosion and often lead to permanent deformation. So, it cannot be effectively used in automotive applications. Ductile mode of fracture gradually transformed to brittle fracture when Al 2014 reinforced with WC. Due to improper distribution, impact strength and elongation of a metal matrix decreases. So, it cannot be used for high performance engines and other automobile components. Accordingly, there exists a need for a novel composite aluminium material having tungsten carbide and fly ash as reinforcement that will eliminate the problem noted in the prior art. A Crucible made of graphite material is placed in an electric furnace. Boron nitride is used for coating the crucible to protect metal sticking to the crucible's surface. The crucible kept in the furnace is filled with 91% to 94% by weight Aluminium 2014 and the furnace is switched on and temperature is set to 800 Deg. to 900 Deg Celsius and heated for a period 40 to 60 minutes and the crucible is held in the furnace for a duration of 30 to 40 minutes and molten metal is obtained 3% to 6 % Tungsten carbide is added as the first reinforcements and 2% to 4 fly ash by weight are added as second reinforcement. The molten metal added with the reinforcements is thoroughly stirred by a stirrer connected to a motor assembly at 400 to 500 rpm for 3 to 7 minutes and the resultant mixture is poured into a die of required shape. After sequence of characterization, it is concluded that the mechanical properties of prepared metal matrix compound are enhanced in the range of 10 to 35 % as compared with standard Aluminium 2014 alloy and the tribological properties are enhanced to 10 to 29 %. Advantages: Good commercial application used in the field of aerospace, military, marine and automobile industries. Used in automobile parts such as hub, gear, piston, and other structural applications to improve the lifetime. Reduced high-cost manufacturing in larger scale. High wear and corrosion resistance Light weight and has good mechanical properties.

DIAGRAM / SCHEMATIC –



**IPR Acknowledgement /
Grant Certificate - 201841008026**



CIPCIS 2020: P- 154

Portable-miniature California Bearing ratio cbr) apparatus and Method of using the same thereof

1)Jnanendra Nath Mandal 2)Prasanna Prabhakar Kulkarni 3)Sushovan Dutta

Abstract : The present invention discloses a miniature CBR apparatus and a method for predicting the California Bearing Ratio for a pavement subgrade/subbase layer to be determined in laboratory which shall be very handy and portable to carry along with. The primary object of this invention is to design the apparatus such that it proves to give an acceptable result when compared to that of conventional laboratory CBR apparatus in lesser time and effort. This apparatus shall be very useful in improving the soil properties especially with the new innovative nano-technology based materials as the apparatus would require lesser quantity in mixing with respect to the lesser size of the mould.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.

IPR Acknowledgement / Grant Certificate – 201621013680

CIPCIS 2020: P- 155

A Novel two components Herbal Microparticulate formulation for Diabetes management

Dr. Santosh S. Bhujbal, Dr. Sohan S. Chitlange and Ms. Aditi Kulkarni

Dr. D. Y. Patil Unitech Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Sant Tukaram Nagar, Pimpri, Pune 411018
Maharashtra, India.

ABSTRACT-The present invention relates to a novel two components herbal microparticulate formulation for the management of Diabetes Mellitus, particularly the present invention related to a novel antidiabetic herbal formulation prepared using microparticulate drug delivery system with improved solubility and bioavailability.

IPR Acknowledgement / Grant Certificate – The Patent Office Journal No. 47/2019 page no 54835 Dated 22/11/2019

http://www.ipindia.nic.in/writereaddata/Portal/IPOJournal/1_4811_1/Part-1.pdf

CIPCIS2020, February 18-20, 2021

CIPCIS 2020: P- 156

A method to predict efficiency of tandem silicon solar cells using Artificial Neural Network (ANN)

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ABSTRACT- The present investigation related to prediction of efficiency of tandem silicon solar cell using Artificial Neural Network (ANN). Artificial neural network with Quadratic Complex Rational Function (QCRF) approach has been used in this simulation method. For developing this simulation method individual layer thickness of all layers of silicon tandem solar cell and efficiency parameter short circuit current (J_{sc}), Open circuit voltage (V_{oc}), Fill factor (FF) were considered. Further the java framework was used to calculate the two important parameters maximum current and voltage required to calculate maximum power depicted to solar cell. The thickness of amorphous silicon and crystalline silicon plays important role in efficiency of tandem silicon solar cell. This Artificial neural network method fruitfully models the nonlinear properties of tandem silicon solar cell.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.

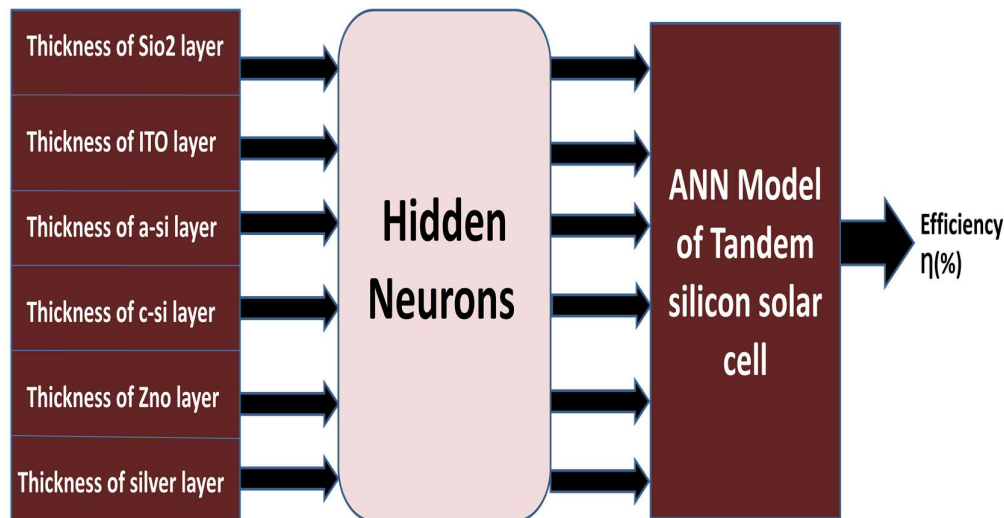


Fig. 1: ANN model of randomly textured tandem silicon solar cells

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CIPCIS 2020: P- 157

SMA Actuator System for Battery Temperature Control

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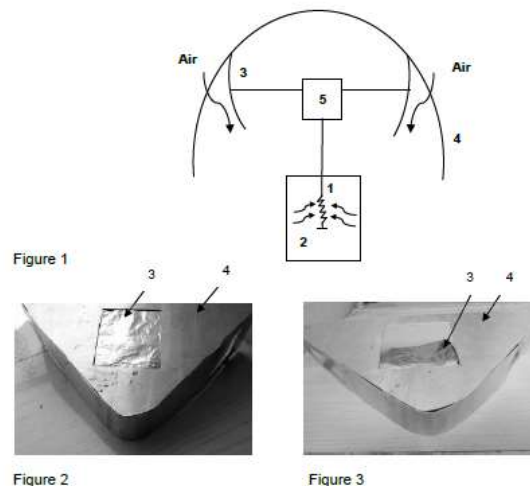
⁴RIT, Rajaramnagar, Maharashtra, India, nagarpolesatish34@gmail.com, 7066220789

ABSTRACT-The present invention generally relates to the field of electronics for vehicles and automobiles. More specifically, embodiments of the present invention relate to a system and methods for efficiently managing and controlling the temperature of batteries used in electric vehicles and automobiles. The design of a thermal management system, or a cooling system in automobile is an important aspect for its performance and efficiency. The usual methods in use are air-cooling, water-cooling and oil-cooling etc., however the continuous air-cooling method is found to be easy to implement and one of the cheapest methods especially, in the case of two wheelers. Currently, water cooling and air cooling are two major ways of cooling a battery. For vehicles with I.C. engine, continuous cooling is required during operation, whereas for an electric vehicle it is sufficient to carry out periodic cooling. At present, thermal management systems of electric vehicles have had limited capabilities, or are complex. It will mainly consist of a shape memory alloy (SMA) wire based sensing and actuation mechanism. SMA has the property of sensing higher temperature of about 40°C and start actuation upon this temperature. The battery is subjected to periodic heating. Once the temperature of battery increases the threshold temperature, the SMA wire based mechanism will be actuated so that the external cooling can now start. Hence the mechanism basically provides or prevents the battery cooling as per the need

SCHEMATIC.

Applicant :RAJARAMBAPU INSTITUTE OF TECHNOLOGY
Application No:

Total No. of sheets 1
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IPR Acknowledgement - 201921031455



CIPCIS 2020: P- 158

Locking Tongs

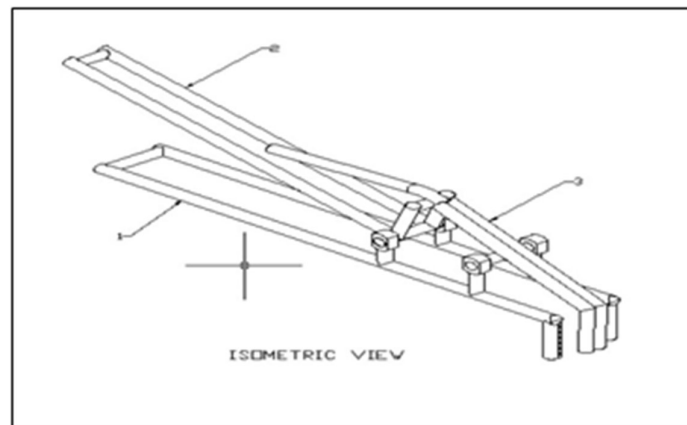
Sachin B. Khot¹, Rohit Maskar², Sumit Mahangare³

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ABSTRACT-These Cooking is most common activity in all homes. Kitchen tools aid to perform this job safely, efficiently and comfortably. Kitchen tong is widely and frequently used while cooking especially in India. This is mainly because of poor popularity of utensils with handle. These kitchen pincers are used for holding and lifting hot utensils without touching them. Existing kitchen pincers used for holding and lifting hot utensils mainly focus on achieving mechanical advantage. These kitchen pincers are class 1 type levers. They have two links in relative motion like scissor. Mechanical advantage is obtained by keeping length on the side where effort is applied more than side which holds the vessel. But this device used for lifting hot vessels has drawbacks. Grip required to hold and lift the utensil is obtained from efforts applied by user. User needs to apply this force till he/she keeps that vessel down, so the safe transfer of vessel from one place to other containing boiling substances is subjected to force applied by him/her. Again orientation and position of tong while holding the utensil also affect the grip on utensil, and there is risk of slipping that hot utensil from that kitchen pincers. Therefore, need exists in field of holding devices like kitchen pincers or tongs to develop tong that can hold the vessel without application of force by user while lifting or holding it. The present invention comprises of kitchen pincers with three links in relative motion. A user needs to apply force only while locking the tong. Once tong is in locking position, the shape of links and relative positions of the links are such that it gives firm grip on vessel even if user is not applying efforts any more. Hence, the force and skill required for holding the vessel with constant force is transferred from muscle to metal. This tong ensures safety of user. One can use this without hesitation for slipping of vessel even if he/she is not used to it.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – 201921031500



CIPCIS 2020: P- 159

A Smart Tool for Testing Deficient Elements in Soil

Vijayalaxmi S. Kumbhar¹, Arti Tekade², Maithili Andhare³, Kajal Mahajan⁴, Samruddhi Jangam⁴, Dhanashree Divekar⁴

¹ Asst. Prof. Department of E&TC Engg. PCCOER, Ravet, (MS) India, vijayalaxmi.kumbar@pccoer.in, 8390455493

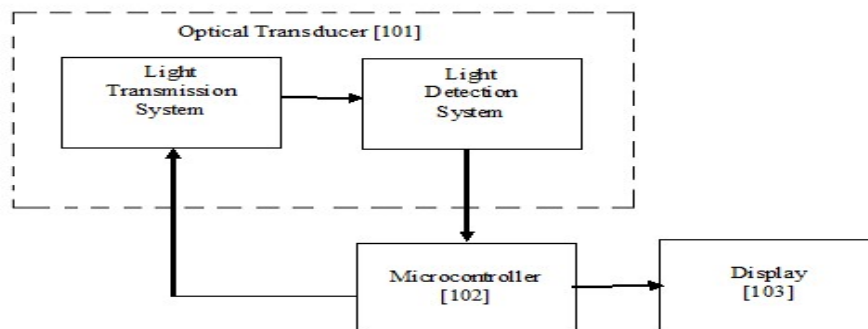
² Asst. Prof. Department of E&TC Engg. PCCOER, Ravet, (MS) India, arti.tekade@pccoer.in, 9860687174

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⁴ Students, Department of E&TC Engg., PCCOER, Ravet, (MS) India

ABSTRACT- An optical transducer which consists of light detection & light transmission system is developed for measuring and detecting the presence of Nitrogen (N), Phosphorus (P) and Potassium (K) in soil. Such transducer is needed to decide how much extra contents of these nutrients are to be added to the soil to increase soil fertility. The N, P and K value of the sample are determined by absorption of light of each nutrient. The optical transducer which consists of three LEDs as light source and a photodiode as a light detector. The wavelength of LEDs is chosen to fit the absorption band of each nutrient. The nutrient absorbs some of the light from LED and remaining light is reflected by the reflector surface. The photodiode converts the remaining light into voltage. The system uses microcontroller for data acquisition therefore the output from the transducer is converted into a digital display reading. Further these NPK ratios are compared with the data stored in memory and the suitable crops for that soil sample will display.

DIAGRAM/SCHEMATIC –



IPR Acknowledgement / Grant Certificate - 201921052371



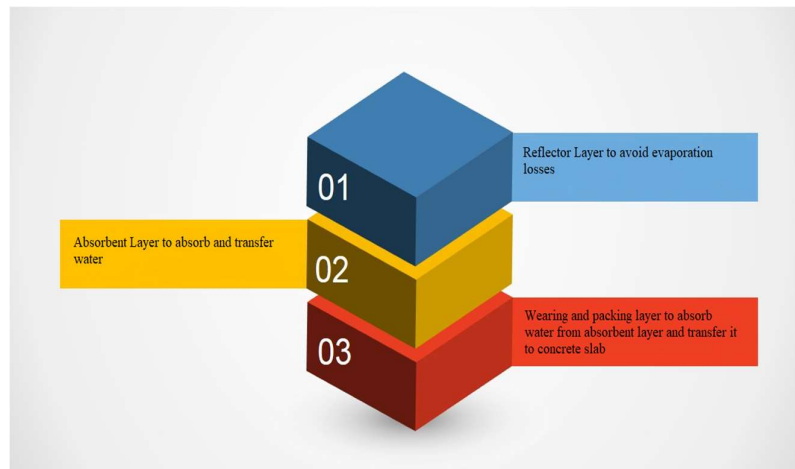
CIPCIS 2020: P- 160

Economical and eco- feasible Method of Slab curing using Curing pad

ANAND BASAVARAJ KUDOLI
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ABSTRACT- Efficient uninterrupted curing is a key to quality concrete. Proper curing of concrete is crucial to obtain design strength and maximum durability considering the cost of curing. Curing is designed primarily to keep the concrete moist, by preventing the loss of moisture from the concrete during the period in which it gains strength. Due to rising problems of scarcity of water and expensive conventional methods of curing, it had become necessary to build up a new method for concrete curing. This project represents the experimental work related to a newly developed, effective and economical method of slab curing. This method consists of a technology namely 'Curing Pad' that not only absorbs and retains water for an extended period of time but also reduces evaporation losses. Concrete pad consists of 3 layers. The top layer is of a reflector material that reduces evaporation losses. The middle layer comprises of an absorbent material that stores and transmits water to the concrete slab. Bottom layer is binding or packing layer that holds all three layers together. Various tests are performed to check the durability of Curing Pad as well as its performance on concrete slab. These test results are compared to those of ponding method of slab curing.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



IPR Acknowledgement / Grant Certificate – 202021010792



CIPCIS 2020: P- 161

An Efficient Vehicle Registration Number Recognition System

Rupali Kawade¹, Triveni Dhamale², Dipali Dhake³, Bhagyashri Gawali⁴, Snehal Gholap⁵

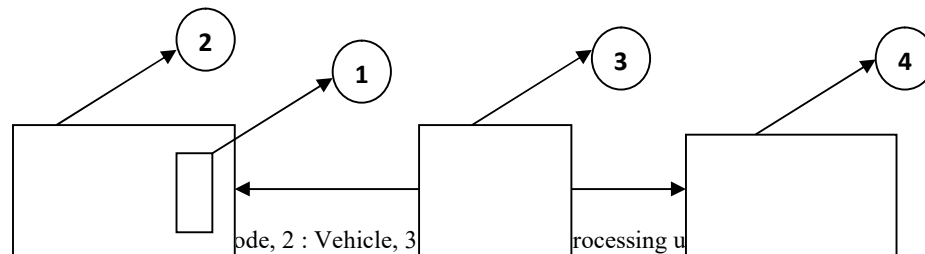
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^{4,5}Lab Asst. Department of E&TC Engg.,PCCOER, Ravet, (MS) India

ABSTRACT-

This invention will now describe in relation to the accompanying drawing in which figure-1 illustrates the QR code placed on vehicle (2). This QR code (1) contains authenticated information of the vehicle owner. In case of emergency or traffic rule violation QR code will be scanned by camera (3). The output of camera is given to processing unit (4) to decode the QR code. This can give us complete information about vehicle owner for further action.

DIAGRAM/SCHEMATIC –



IPR Acknowledgement / Grant Certificate – CBR No – 27118, Date: 17/12/2019



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**CONFERENCE ON IPR, PATENTS, COPYRIGHTS,
INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P- 162

Automatic Sanitizing System

Sanskriti Sawant¹, Risha Shetty², Mrunali Rajigare³

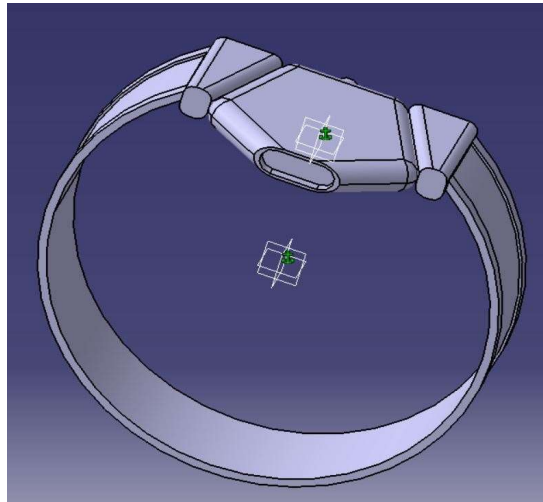
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ABSTRACT- We wash our hands to maintain hygiene and for prevention from diseases, and especially we follow this routine frequently in this era because of the very recent COVID-19 pandemic that we have experienced. The novel corona virus is spread from one infected person to others with whoever they come in contact with, such as family members, caretakers etc. This new virus survives on various surfaces, but they can be destroyed with certain cleaning and disinfecting products. It is necessary to remember the significance of effective cleaning and sanitization of hands, also the various surfaces and objects touched by people, so that we could prevent the spread of this infectious disease. For example, almost all people working in various sectors including jobs, daily chores, shopping, etc. need to remain hygiene which is mandatory. For this reason, various sanitizing devices and systems have been created for disinfection of hands and objects. So, in these circumstances we want to integrate a sensor- based solution which will act as a disinfectant and sterilizing agent. For example, In the case of driving, we need to sanitize the steering wheel, but instead of this, killing the bacteria and germs using this device would be a better solution. So, in the given context, we thought out of box and worked on this new technology with some creative innovation like UV lamps, sanitizer, etc. We are trying to combine this solution which is innovative as well as it will also be portable so that we could carry it to wherever we go. Globally, millions people still open defecate, billions of people lack access to basic sanitation that leads to growing of viruses and bacteria which eventually contributes in spreading various kinds of diseases. Especially, the COVID-19 virus can remain on a variety of surfaces, but most cleaning and disinfecting products can destroy it. To prevent the spread of infection, one should regularly clean the objects and surfaces that are often touched. As, it is important to remember to effectively and promptly clean and disinfect hands similarly sanitizing surfaces including objects is of utmost importance, to prevent the spread of contagious diseases. UV-C radiation technique is a disinfectant new technology that can kill a wide array of microorganisms including vegetative and spore forming pathogens. The technology is getting more affordable and has produced consistent reproducible significant reduction of bacterial pollution. However, all the cleaning devices and systems developed so far are highly expensive as well as bulky. Hence, a new disinfection device is proposed, which is a portable light weight device that provides automatic and autonomous disinfection.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.





CIPCIS 2020: P- 163

Advanced Onion Storage System

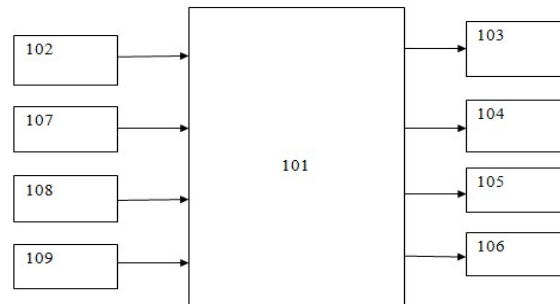
Triveni Dhamale¹, Rupali Kawade², Dipali Dhake³, Bhagyashri Gawali⁴, Snehal Gholap⁵

^{1,2,3}Asst. Prof. Department of E&TC Engg.,PCCOER, Ravet, (MS) India, triveni.dhamale@pccoer.in, 9422009953

^{4,5}Lab Asst. Department of E&TC Engg.,PCCOER, Ravet, (MS) India

ABSTRACT- Innovation is based on proposing a onion storage system consists of atmega328p controller(101), sensors like ammonia gas sensor(107), carbon dioxide sensor(109), temperature and humidity sensor(108) which are the input of controller on the basis of those inputs the controller can process on input data and produced desire output. The outputs of the controller are given to exhaust fan, dryer system, LCD display (103), stepper motor(106) etc. The large onion storage is divided in to the small compartments for easier handling of our proposed system. Sensors are connected in the compartment of storage so they are easily able to sense the gases emitted by the rotten onion.

DIAGRAM/SCHEMATIC –



IPR Acknowledgement / Grant Certificate – CBR No. – 27161 Date: 17/12/2019



CIPCIS 2020: P- 164

Dual-Piston Water/Coolant-Injected Self-Cooled Six-Stroke Internal Combustion Engine with Variable Compression Ratio

Deepak Devidas Biradar¹, Vinaya Deepak Biradar², Godawari Devidas Biradar³

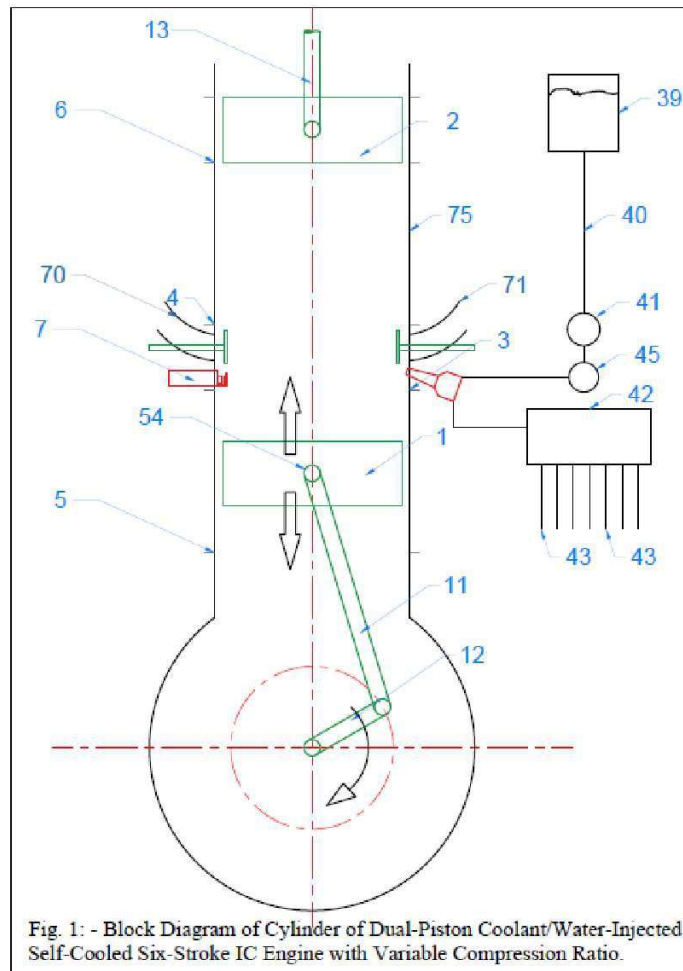
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ABSTRACT- Dual-piston water/coolant-injected six-stroke internal combustion engine (ICE) with variable compression ratio works in a similar manner as that of conventional four-stroke ICE for initial three strokes namely suction stroke, compression stroke and power stroke; during the fourth stroke the exhaust valve remains closed and the piston moves from Outer Dead Centre (ODC)/Bottom Dead Centre (BDC) to Inner Dead Centre (IDC)/Top Dead Centre (ODC), the crank rotates by 180°, but the volume of the cylinder is kept constant by the movement of another specially arranged opposed piston; this is the fourth stroke and it is an idle/displacement/movement stroke; during this stroke the hot pressurized burnt gases from the cylinder are simply displaced keeping all of its thermodynamic properties same; when the piston completes its displacement stroke the water/coolant is injected in atomized form inside the cylinder; when the water comes in contact with the hot burnt gases and cylinder wall, it absorbs the latent heat of vaporization and undergoes substantially instantaneous vaporization; when the water changes its phase from liquid to gas (vapour) its volume increases by about 1600 times to that of the volume of water injected in its liquid state; this behavior causes a sudden increase in the pressure of the mixture of burnt gases and steam/vapour formed; these pressurized mixture of burnt gases and vapour of water pushes the piston down which results into the second power stroke which is the fifth stroke; during this stroke both the valves are kept closed; when the piston reaches at the ODC, the exhaust valve is opened and the piston starts to move towards the IDC and pushes the mixture of burnt gases and the vapour of water/coolant out of the cylinder; at the end of this stroke the exhaust valve closes, inlet valve opens and the piston starts to move towards ODC which is the beginning of the suction stroke of the next cycle.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – CBR No 137, Date 03/01/2020



CIPCIS 2020: P- 165

Wet Garbage management bag

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ABSTRACT - The wet garbage management bag is a rectangular bag made from non woven porous spun bond Polypropylene material having a long handles for hanging the bag. It is a two-compartment bag wherein the two compartments are separated by a nylon mesh or any suitable porous material. The upper compartment consists of a zip and fastener attached to the top of the upper compartment to add the wet garbage. The upper compartment also holds the earthworms on the mesh. The bag maintains its shape due to the non corrosive metal or plastic strip stitched or hooked inside the top corner to give shape to the bag. A zip and fastener facility is provided in the lower compartment to insert a plastic tray to collect the leachate and the additional water poured to maintain humid and wet conditions enhancing the earthworm's activity. A nylon mesh is stitched a few inches above the bottom of the bag so as to filter the vermicompost collected in the lower part. Here too, a small zip (5) has been attached to collect the vermicompost periodically. The non woven porous spun bond Polypropylene material makes sure that enough air is passed through the bag making sure that the bag does not emit odor. It also makes sure that the garbage does not rot. The closed bag protects the earthworms from flies, birds, ants, rats and other rodents.



IPR status : Patent Application No. 222/MUM/2013 Date : January 24,2013



CIPCIS 2020: P- 166

Stabilization of Black cotton soil using Crushed sand and Lime.

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ABSTRACT- Soil stabilization is the method of the alteration of the geotechnical properties to satisfy the engineering requirements. History reveals the use of mud straw, sticky rice mortar etc. for the purpose. As time passed by, advanced methods evolved in this field like physical methods, chemical methods, thermal methods, use of biopolymers, etc. Commonly used soil stabilization methods include mechanical stabilization, cement stabilization, lime stabilization, bituminous stabilization, chemical stabilization. electrical stabilization, stabilization using grouts, geotextiles etc. From these methods, combination of mechanical & chemical stabilization is widely adopted method because its application involves simple mixing of particles likes sand (Mechanical stabilization) along with lime bonding (Chemical stabilization). Vast research have been done on stabilizing soil using lime, natural sand, cement, bitumen, fly ash, coir and geotextiles etc. The present research concentrates on Black cotton soil stabilization using Crushed sand & Lime. Crushed sand: It is manufactured by Crushing rocks, quarry stones or larger aggregate pieces into sand size particles in a factory or quarry. The shape of Crushed sand is cubical and angular and has a rough texture and hence better for construction. It has no moisture. It has very good load carrying capacity hence used as stabilizer for stabilizing Black cotton soil. Lime: It is a one of the essentials building materials used predominantly as a binder material in lime mortar for construction since it provides better binding with moisture which results in better durability, pozzolanic nature of the lime gives less swelling when blended with weak black cotton soil. Lime mainly consists of CaO with some amount of clay in it, hence Lime is used as stabilizer for stabilizing Black cotton soil. Crushed sand & Lime are used as soil stabilizers, where crushed sand improves load carrying capacity and Lime acts as binding agent for stabilizing Black cotton soil at optimum mix i.e. Crushed sand 15% and Lime 6% by the weight of the soil for stabilizing Black cotton soil, it shows improvement in the Physical and Engineering properties of soil. This study concentrated mainly on the improvement in the strength of the Black cotton soil with addition of Crushed sand and Lime through compaction test and California Bearing Ratio (CBR) test. For this purpose, trials of Crushed sand and Lime were carried and Optimum blend i.e. Crushed sand 15% & Lime 6% by the weight of the soil for stabilizing Black cotton soil. Experiments were conducted on virgin black cotton soil and Stabilized Black cotton soil separately.

IPR Acknowledgement / Grant Certificate – 202021049162



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P- 167

Headgear Ophthalmic Device

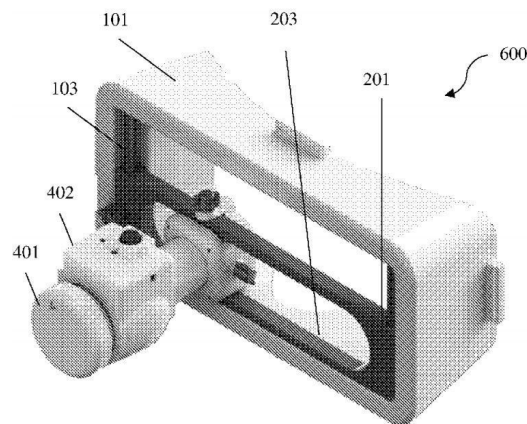
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ABSTRACT- Glaucoma is an eye disease leading to progressive loss of vision. It can be detected and monitored by measuring the intraocular pressure (IOP). Conventional tonometers used for this purpose are cumbersome (require qualified ophthalmologists) and invasive (uncomfortable for the patients). In this work, a novel portable instrument for IOP measurement was developed, based on a combination of indentation and applanation principles. The assembly comprises an indenter, adjustment compartment and knob. The compartment also houses a spring, force-sensitive resistor, and printed circuit board to check the IOP after applanation. The corresponding reaction force from the eye is obtained on a force-sensing resistor using Imbert-Fick's principle. This activates an LED signal for high levels of IOP that indicate a risk of glaucoma. The main components of the device were prototyped through 3D printing in ABS plastic. The device provides an efficient way to accurately position it over the eye for different face structures and varying eye positions among patients. It also allows sliding the instrument along a horizontal rail to conveniently check both eyes in the same setting. The proposed innovation can be used by healthcare workers to screen Glaucoma patients in rural medical camps. It can also be used at home for regular check-up by patients themselves and take suitable precautionary measures. The present invention provides a headgear ophthalmic device (600) comprising a casing (101) with a pair of vertical slide rail (103). The pair of vertical slide rail (103) facilitates the vertical movement of a Y-slider (200). The Y-slider (200) is configured to house an X-slider (206) and position the X-slider (206) along the Y-axis. The Yslider (200) comprises a horizontal slide rail (201) to slide the X-slider (206) along X-axis. The X-slider (206) is configured to house an indenter assembly (400), wherein the indenter assembly (400) is enabled with an indenter (403), a knob (401) and an adjusting compartment (402), wherein the knob (401) is configured to move the indenter (403) along Z-axis and gently press a cornea of a user. The headgear ophthalmic device (600) is useful for optometrists and ophthalmologists for rapid and convenient monitoring of eye-related parameters such as intraocular pressure.

DIAGRAM / SCHEMATIC –



IPRAcknowledgement/Grant Certificate – Application number - 202021007111 A International PCT number - WO2020/141499A2



CIPCIS 2020: P- 168

Atomiser Device

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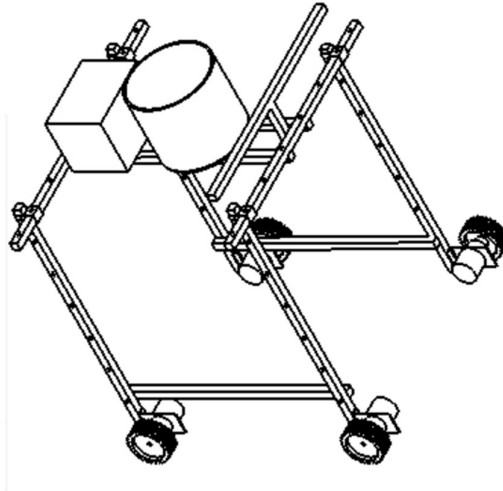
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ABSTRACT- The population of India is increasing rapidly. In order to fulfil their diet and needs, the production of foods must be increased. But this must be affordable to everyone. In India farming is done by traditional ways. Besides, there has been larger development of industry and service sector as compared to that of agriculture sector. The mechanization of agriculture in India to some equipment has been developed. The pesticide sprayer is one among them and it is done by traditional farm workers by carrying backpack type sprayer, which requires human effort or by using electric pump. To improve the agriculture system and to reduce the human effort and problems associated with the backpack sprayer new equipment is fabricated which will be beneficial to farmers. Our contribution on our project is advancing the spraying methods which are friendly to use and operate and which can be used in different spraying stages of farming as per process requirement. It can be operated in small farming land with standard spacing decreasing the labour cost and human effort.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – CBR No. 4063, Date: 26/02/2020



CIPCIS 2020: P- 169

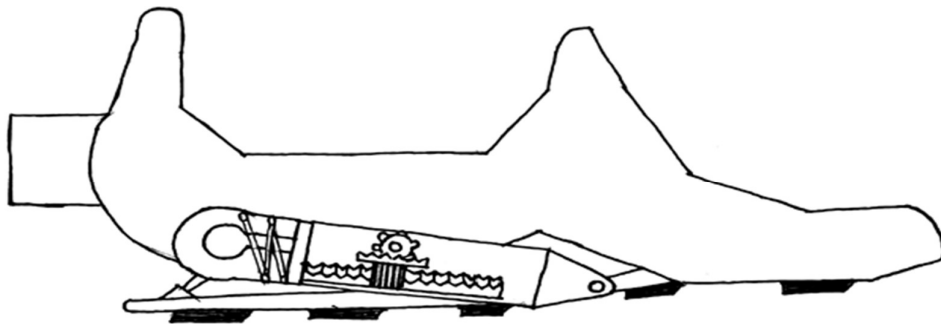
Energy generating Shock absorber shoes

Nayan Madhav Sarode¹

¹Dr. Babasaheb Ambedkar Technological University, Maharashtra, India, nayansarode2@gmail.com, 9373063480

ABSTRACT- Electricity is a basic need in our life. Each task in our day to day life consists of electrical appliances. Moreover rapidly increasing population is leading to lack of fossil fuel to generate this energy. Also use of this fossil fuel is causing environmental changes that is affecting living organism. To reduce this problem and fulfill minimum need of energy in our day to day life; I have made an energy generating and shock absorbing shoes. It can generate electricity while walking or running. The energy generated is eco-friendly and it will be a new source for energy generation. In this I have used shock absorbers which will increase comfort while walking or running. Shock Absorber is a mechanical device used to reduce shock impulses. Energy is generated by using gear and generator motor mechanism. It is stored in battery for further uses. We can also connect our mobile charging cable and charge our phone while walking or running. There is also place to join LED which can help during a walk at dark area. This project is basically done for increasing future scope for energy generation. It will also bring a hope to recycle wasted energy due to running or walking.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – Application No: 202021002128



CIPCIS 2020: P-170

A System for the Measurement and Indication of Weight in Elevators

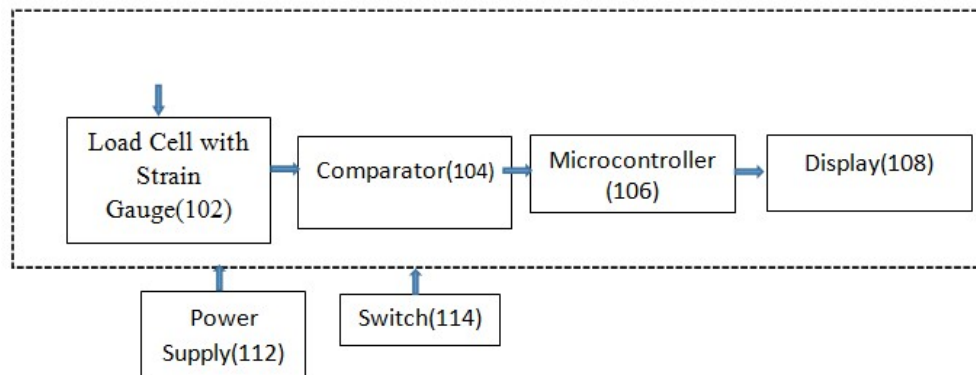
Harish Umashankar Tiwari, Amruta Harish Tiwari

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ABSTRACT-

The system of the present subject matter is an advancement in elevator to measure and display weight of a person. The advancement in the elevator is done to include a system for the measurement and display of weight. A load cell is placed at the bottom of elevator to sense weight, the signals are processed and the necessary information is forwarded to display the weight of the person using elevator. The objective is to alarm the user so as to avoid use of elevator for weight conscious and health conscious people.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047774



CIPCIS 2020: P-171

A System of Vehicle Indicators to Use the Hazard Lights and Direction Indicators Simultaneously

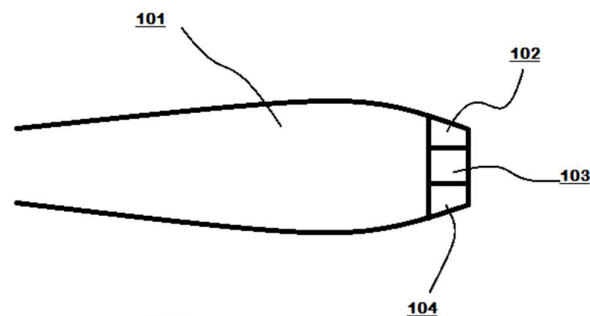
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

A system of vehicle indicators to use the hazard lights and direction indicators simultaneously, a circuit which lets the simultaneous use of hazard lights and direction indicators, first when the hazard lights are being used when the car is being drove and simultaneously the driver has to use the direction indicators, there is provision in the system where, when single direction indicator is used corresponding hazard lights are switched of simultaneously and the following direction indicator turns on, second when the use of direction of indicator decays, hazard lights are simultaneously switched on according to the prearranged system, Typically, said first the hazard lights are switched on for vehicle to get recognized, said second the hazard lights can be turned on using any existing power source, said first the direction indicators can be simultaneously used while the hazard light is turned on, said first while the hazard lights are in use and the direction indicator is to be used, the direction indicator can be directly switched on without turning of the hazard light and as the use is done the hazard lights can resume to glow.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047775



CIPCIS 2020: P-172

A System for Drinking Water Cooler for the Enhancement of Performance

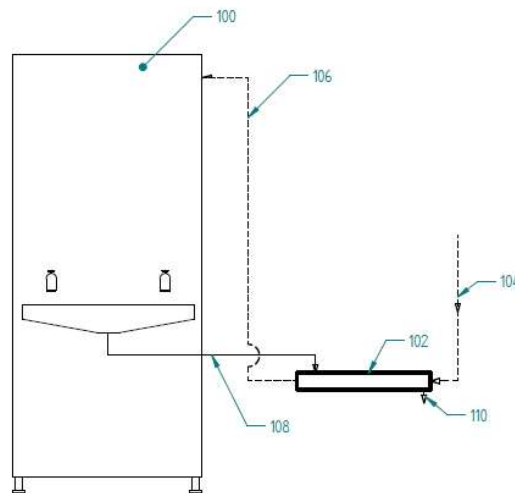
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

The system of the present subject matter is an advancement in the drinking water cooler. Water is cooled in two stages first in an evaporative cooler by utilizing the potential of waste water going away to drainage line. It cools water partially and thereby reducing the required cooling in main cooler which works on the principle of vapor compression refrigeration. The main advantage claimed is power saving without much effect on overall cost of the machine.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047776



CIPCIS 2020: P-173

A System for the Measurement and Indication of Time with Rotating Dial

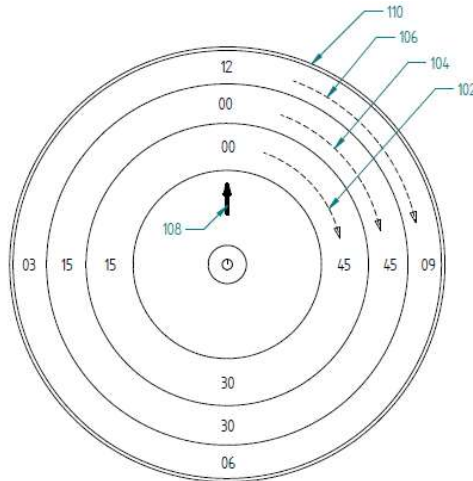
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

Disclosed herein is a system for the measurement and display of time (100), with rotating dials and fixed pointer the system (100) comprising of means to measure time in second minutes and hours. The system of the present subject matter indicates time by measuring the relative positions of rotating dial with respect to a fixed pointer. The time is measured in second hour and minutes by using three rotating dials. The dials are marked with time indicating numbers like 1 to 12 for hours and 0 to 60 for minute and seconds. It gives an entire new type of watch or clock where there are no moving or rotting hands of conventional watches.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047777



CIPCIS 2020: P-174

A System for Tube to Remove the Inside Stored Material

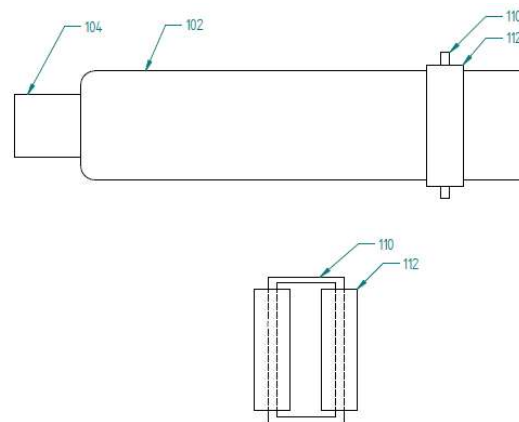
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

¹Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT-

There is provided a system for easy removal and minimizing wastage of material due to incomplete removal of stored material in a tube. As shown in Figure 1, 100 is the tube container in which material required to be stored is filled. 110 is the closed end of the tube. 108 is the one way lock which allows the clip to be installed on the tube. This locking arrangement is like V shape wings fitted at the bottom with the wings parallel to the length of the tubes. The closed end of V shape lock is fixed at the bottom and the two legs of lock are open and positioned along tube body. Due to its shape the locking arrangement restricts the sliding clip from coming out. 106 is the moving clip which can move up and down along the length of the tube pushing the stored material out from the opening. 104 is the cap fitted on the tube. The details of the movable clip 106 in Figure 1. Are shown in Figure 2. In figure 2, 202 and 204 are hollow cylinder placed in the clip such that, they can freely rotate and can roll over the surface of the tube. 206 is the rectangular structure holding the hollow cylinder 202 and 204.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047778



CIPCIS 2020: P-175

A System for Minimization of Wastage of Soap

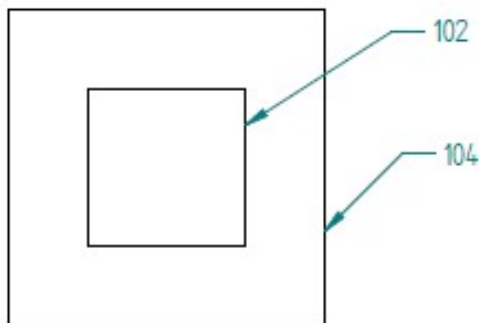
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

Disclosed herein is advancement in soap. The system (100) includes means for enhancing the utility of soap by providing a block or core inside soap. The block inside reduces the waste of soap material and a soap can be used fullest possible. The block later is used to clean body. It is designed in such a way that allows use till very last and thereby economical.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047779



CIPCIS 2020: P-176

A SYSTEM FOR END FINDING AND TAPE CUTTING FOR ADHESIVE CELLO TAPES

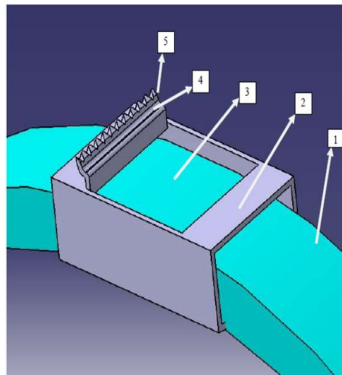
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

The system of the present subject matter is advancement in the adhesive cello tape. The common problem of edge finding and cutting of cello tape in piece is addressed; a sliding clip or clamp is installed on the roller along the circumference of the roller. The clamp is so designed that the cello tape strip rests on the clamp thereby helps in locating the edge of the cello tape strip. The clamp or clip is formed from metal or plastic wire or strip and is wrapped on the cello tape bundle to minimum two wraps. The cello tape strip with zigzag edges flows through gap between these wraps and the clip along with the cello tape moves on the circumference of the cylindrical cello tape bundle. The cello tape is designed as a zigzag strip from both side of the strip thereby the cutting becomes easy.

DIAGRAM / SCHEMATIC -



IPR APPLICATION / PATENT NO. – 201921047791



CIPCIS 2020: P-177

A SYSTEM FOR SMOOTH IRONING AS PER FABRIC REQUIREMENTS

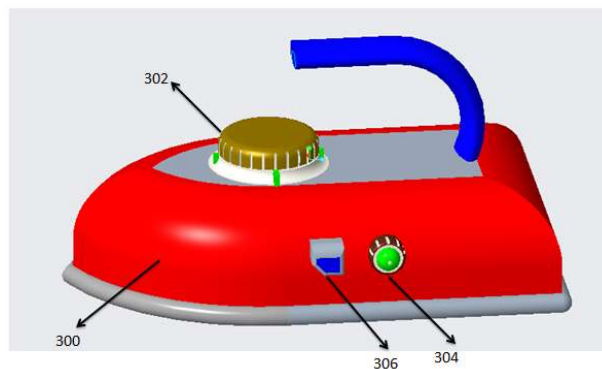
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

¹Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT-

Disclosed herein is an ironing system which includes iron of the present system (300) and Fabric with stored information. Information required for smooth ironing of the fabric is stored electronically and or in printed form on fabric. The means for storing information is RFID storage. The information is also available in printed form on the fabric at suitable position on the fabric in the form of suitable recommendation of ironing temperature and other requirement like weather steam is required or not. The Iron of the present subject matter is equipped with a reader that can read and further process the information. The processed information is then sending to the thermostat for setting desired temperature. The processor also controls flow of steam. A manual system is also employed which is a knob placed on Iron which controls the temperature manually

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047792



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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-178

A System for cutting zigzag edges on strips

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ABSTRACT-

The system of the present subject matter is advancement in elevator to measure and display weight of a person. The advancement in the elevator is done to include a system for the measurement and display of weight. A load cell is placed at the bottom of elevator to sense weight, the signals are processed and the necessary information is forwarded to display the weight of the person using elevator. The objective is to alarm the user so as to avoid use of elevator for weight conscious and health conscious people.

IPR APPLICATION / PATENT NO. – 201921047780

CIPCIS 2020: P-179

AN INTEGRATED KEYPAD WITH MOUSE FOR COMPUTER

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ABSTRACT-

The system of the present subject matter is an integrated model of Computer keypad and mouse. The mouse of the present subject matter is designed as a combined unit of mouse and keypad with features of both. The problems associated with the operation of keypad as compared to operation with mouse are minimized. The features of the keypad are not compromised but the utility of the system increases.

IPR APPLICATION / PATENT NO. – 201921047790

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-180

An Altration in Television and Its Remote Control to Make Easy Search of Remote Control

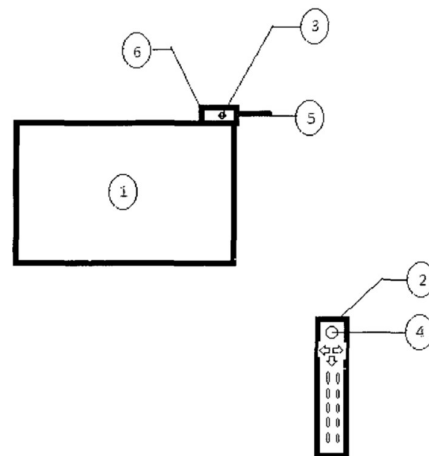
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

A system for searching a misplaced remote control of a Television or other electronic gadgets, the said system uses a combination of RF (radio frequency) transmitter and a receiver, the said combination is known as RF Module Pair(TX+RX), the said transmitter is required to be installed in Television, the said reviver is to be installed in remote control, the said transmitter installed in the TV is having a switch which will be operated when remote is to be searched, the receiver installed in the remote control have a beeper which beeps after receiving signal from transmitter, the pair of receiver and transmitter is a RF module pair(TX+RX). The beeping sound of receiver helps in locating the misplaced remote control The overall cost of installing this system is very small(Rs.300).

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047787



CIPCIS 2020: P-181

Refrigerator With Instant Cooling System

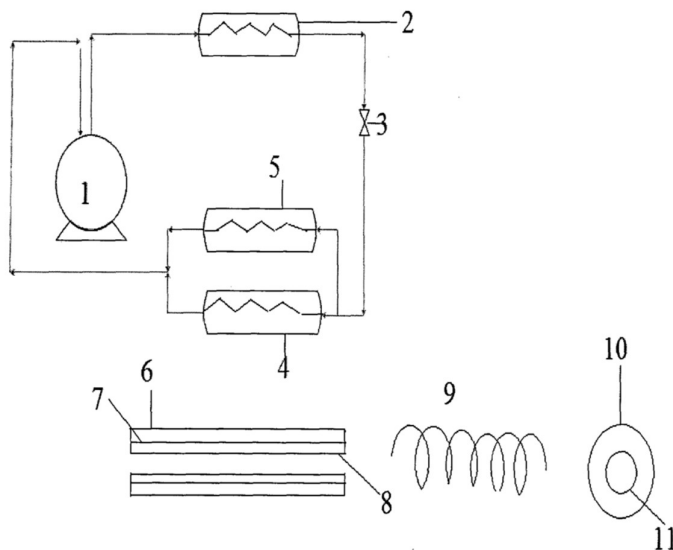
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

¹Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT

A system for instant cooling in a refrigerator, said system comprising: conventional vapor compression refrigeration system and an additional evaporator, said additional Evaporator is connected in parallel or in series as required, said additional evaporator is covered by a brine solution jacket, said jacket containing brine solution is covered at back side, said evaporator and covered jacked is arranged in such a way that a hollow space is formed where material to be cooled is placed, said jacket is made from a flexible material so that it can hold a standard size bottle of one liter of water, said additional evaporator absorbs heat from material to be cooled through brine solution, the said brine solution has a freezing point around -10°C , said additional evaporator enclosed in brine'solution jacket forms an assembly in which material to be cooled is placed, said assembly is enclosed in an insulating material cabinet, said cabinet is covered from front is placed below regular evaporator of refrigerator.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 452/MUM/2015



CIPCIS 2020: P-182

A Time Scale (Indicator) On Writing Pen

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ABSTRACT-

A pen with a writing time indicator is invented; the said pen has an indicator to show the writing time possible with the pen; said time duration is decided based on the ink in refill or the pen; the said time duration is decided on the basis of calibration; the said calibration is done in laboratory based on average speed of a person; the said average speed is calculated by taking mean of speed of writing of a sample of people using same type of pen; the said calibration time is printed on the body of the pen; the said time duration is the indication of writing time possible with the pen at an average speed; the said system is useful in many applications like writing in an examination; the said improvement in existing technology of pen is with no additional cost in the basic cost of the pen

DIAGRAM / SCHEMATIC –

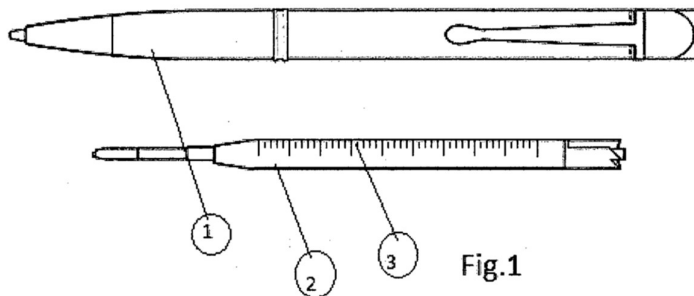


Fig.1

IPR APPLICATION / PATENT NO. – 864/MUM/2015



CIPCIS 2020: P-183

A Two Wheeler Vehicle With Dual Side Stand

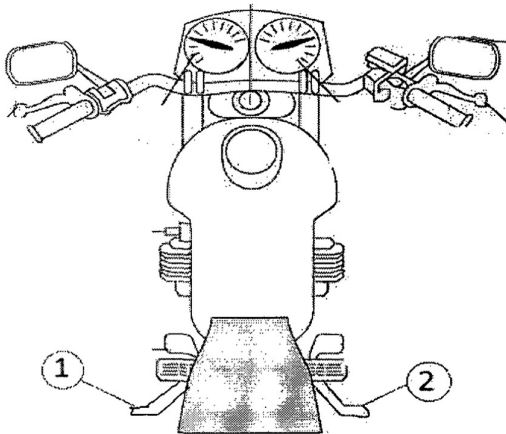
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT

A system used for parking the vehicle on both the side as per the person's requirement. Said system, consists of the similar side-stand installed on the either side of the motorcycle (that is on the right side).the above system will help the person to park his/her vehicle on any side as per his/her convenience. The overall cost of installing this system is very small.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO.– 866/MUM/2015



CIPCIS 2020: P-184

A Compact Internal Combustion Engine With Charge Comprising Of Liquid O₂ And Fuel

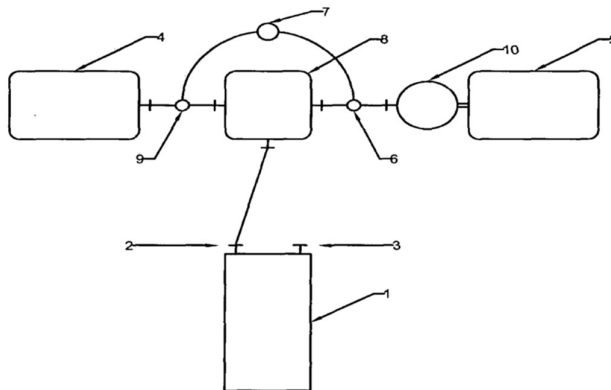
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ABSTRACT-

An internal combustion engine system for high power output, said system comprising: input means adapted to receive 100% oxygen in place of air with fuel said fuel can be of any type which requires oxygen for combustion; firstly expansion chamber is adapted to receive liquid O₂ from said input means, for change of state from liquid to oxygen gas; said oxygen gas is supplied to the mixer through said pressure control valve wherein controlled by integrated control unit; secondly flow control valve is adapted to receive fuel from said input means; said flow control valve being a flow control valve allows a fixed proportion of fuel to pass through it, further said fuel is then supplied to the mixer, wherein the flow control valve is controlled by integrated control unit; said integrated control unit controls the flow and pressure of fuel and oxygen in fixed proportion to avoid improper combustion and hazardous exhaust gases; said mixer can be carburetor in case of spark ignition engine; said mixer is used for mixing oxygen and fuel to a required oxygen fuel ratio; oxygen-fuel ratio required in said system is around 3.5 depending on type of fuel; said mixer supplies the charge to said internal combustion chamber for the combustion process; proceeding with combustion power output is 4 times that of present internal combustion engine; in said system emission reduces by 3 to 4 times.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO.– 201921047772



CIPCIS 2020: P-185

A System For Cooling Using Engine Exhaust Heat

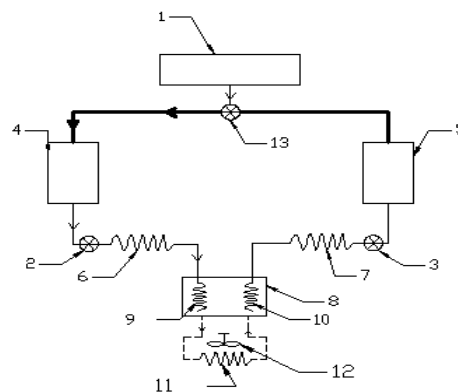
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India.

ABSTRACT-

A system for cooling using engine exhaust heat, said system comprising: input means adapted to receive exhaust gas from said engine; first adsorber adapted to receive exhaust gas from said input means, said receiving being controlled by a first valve, said adsorber being a shell and tube heat exchanger such that said exhaust gas passes through said tubes and refrigerant adapted to be compressed in said shell of said heat exchanger, wherein, adsorbing material of said first adsorber is heated upon receipt of said exhaust gas thereby making refrigerant to come out of said adsorbing material; second adsorber adapted to receive exhaust gas from said input means, said receiving being controlled by a second valve, said adsorber being a shell and tube heat exchanger such that said exhaust gas passes through said tubes and refrigerant adapted to be compressed in said shell of said heat exchanger, wherein, adsorbing material of said first adsorber is heated upon receipt of said exhaust gas thereby making refrigerant to come out of said adsorbing material; first air cooled condenser coil placed in series with said first adsorber; second air cooled condenser coil placed in series with said second adsorber; first evaporator adapted to be connected in series with said first air cooled condenser; second evaporator adapted to be connected in series with said second air cooled condenser; and cooling coil with fan and water pump in order to circulate cold water in said cooling coil, wherein said fan from one side is adapted to supply cold air to a cabin of vehicle, and further wherein, said water pump is adapted to pump water from and back to a water tank and said cooling coils.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201921047772

CIPCIS 2020: P-186

Magnet In The Pen Clip For Improved Grip In Pocket

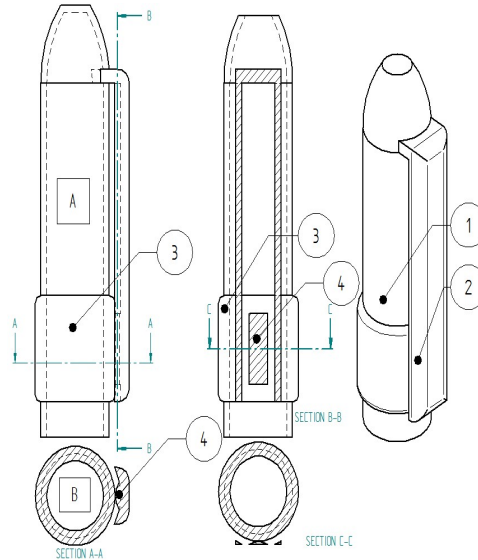
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ABSTRACT-

A modification of a pen cap in which there is a use of permanent magnet and a ferromagnetic material such as iron, nickel or cobalt so that there is a firm clipping of clip of cap so that there is no misplacing of pen; the said magnet is fitted at the lower tip of the clip; the said tip is covered or uncovered; the said pen clip tip is made up of permanent magnet and the interfacing part of the barrel of cap with clip is made up a ferromagnetic material and vice versa; when the pen is clipped to a pocket of shirt and even though there is a movement of the external body the pen doesn't fall due to magnetic effect between clip and the surface of barrel of cap designed; the cost of the pen is not much affected as the cost of a small required magnet is very small.

DIAGRAM / SCHEMATIC -



IPR APPLICATION / PATENT NO. – 2918/MUM/2015



CIPCIS 2020: P-187

A System For Reduction Of Weight Of School Bag

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ABSTRACT-

A system or scheme for reducing weight of school bag of students, said system is about rearranging the contents of books used by the students; in the said system it is proposed that the chapters of the books should not be arranged subject wise. It is proposed that the all the chapters from all the books of the standard syllabus should be divided in sections. One particular section should contained chapters from all subjects. For example if a student has to study four subjects with 12 chapters in each subject, it is proposed that there can be four sections. In each section three chapters of each book can be placed. Similarly the notebooks can also be rearranged. The notebooks can be prepared according to requirement in desired number of section. Each section of notebook contains required pages for particular subjects. In this case student has to carry only one section of books and one section of notebook to school. In case those chapters of particular subjects are finished and chapters of another particular subject are unfinished student has to carry maximum two sections of books and two sections of notebooks. This will reduce the load to be carried to school and thereby will reduce the weight of schoolbag by 75 to 50 %.

IPR APPLICATION / PATENT NO. –



CIPCIS 2020: P-188

A Mechanism For Transferring Material In A Multistory Apartment Building

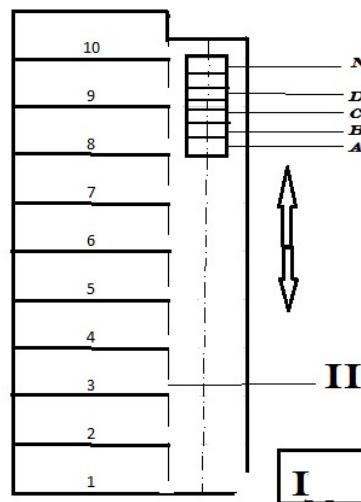
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

A system for transferring items to apartments in a multistory building, in the said system a mechanism is proposed, the mechanism consist of an electronically controlled trolley arrangement along the length of a multistory building. The objective of the proposed design is to save electricity enhance security for apartments and also to save human efforts. The trolley is designed with multiple compartments, where material to be transported to apartment can be placed, the compartment have plungers to push material in to an apartment. The apartment has provision to receive the delivered material. An alarm system is proposed to inform the resident about receipt of material. The proposed mechanism will help to reduce security threat to apartments; it will also help to reduce the efforts of person, who otherwise has to visit multiple apartments.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. –



CIPCIS 2020: P-189

Adjustable Back Support Of Front Seat In A Car To Give Flexibility Of Forward And Backward Seating

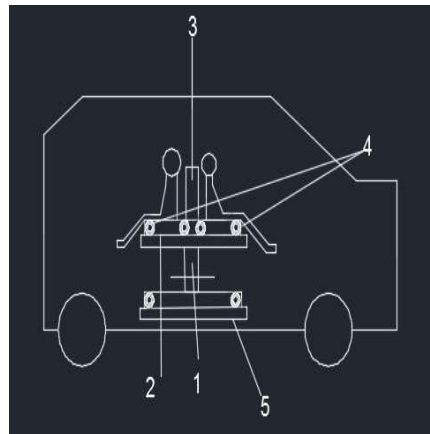
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

A system for changeable seating position in a car for front passenger, said system comprises of a sliding mechanism fitted between back support of seat and sides of the base of the seat, said sliding mechanism allows the back support to move backward and forward along the length of the seat, said back support is fitted with a mechanism to allow the back support by 90^o, said sliding mechanism and 90^o turning seat can convert the seat in to a bed, said arrangement gives flexibility in seating, said arrangement allows the seat to change in to a bed in case of emergency

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 453/ MUM/ 2015



CIPCIS 2020: P- 190

Synthesis, characterization and preliminary biological evaluation of novel isoindoline-1, 3-dione/phthalimide analogues

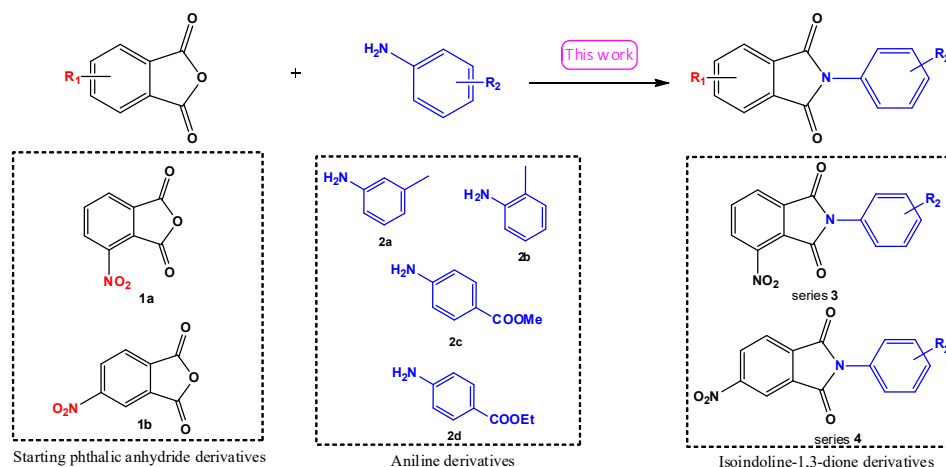
Sharad Sankhe¹, Nitesh Chindarkar²

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ABSTRACT- A series of novel isoindoline-1,3-diones/phthalimide analogues were synthesized by coupling substituted phthalic anhydride with different aromatic amines. They are lipophilic and neutral compounds and can therefore easily cross biological membranes in vivo and showing different pharmacological activities. Bioassay indicated that newly synthesized isoindoline analogues exhibited moderate to high activities against Gram-positive, Gram-negative and fungi strains. These encouraging results could be helpful for the development of new antibacterial or antifungal compounds.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement No./ Application No. – CBR NO. 30951 Date: 11/12/2020



CIPCIS 2020: P- 191

System and method for designing a hybrid Memristor-Cmos Nonvolatile random access memory cell and architecture with Sneak current control

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ABSTRACT- Moore's law is the experiential remark that component density and performance of integrated circuits increase twice every year, which used to be then revised to doubling every two years. Moore's law, however, are not able to be continued because of the nanoscale CMOS transistor sizes will reach fundamental physical limits within the next decade. So the progressive solutions are required due to technical limitations because of the ultimate ending of Moore's law and the need for significant attention in research to develop new configurations for next generation computing systems. The introduction of nonvolatile memory into the main memory or cache architectures can be an effective approach for scaling back booting time and power consumption. As the technology is advanced, new storage capabilities are required. Memristor-based SRAM cell can be a capable circuit module that might permit conventional SRAM cells to preserve data when power is off without the need of additional circuitry. The inventions relate to a design of a hybrid memristor-CMOS NVRAM cell and architecture with sneak current control for integrated circuits. Further the invention relates design of memristor-CMOS NVRAM cell with gating transistor to control or minimize the sneak current in memory architecture. Also the invention relates to design of memory architecture using said memory cell to provide better isolation between adjacent cells with minimum sneak power. The invention relates also a generalized technique to control the sneak current in memory array designed with other types of memory cells using the gating transistors.

DIAGRAM / SCHEMATIC –

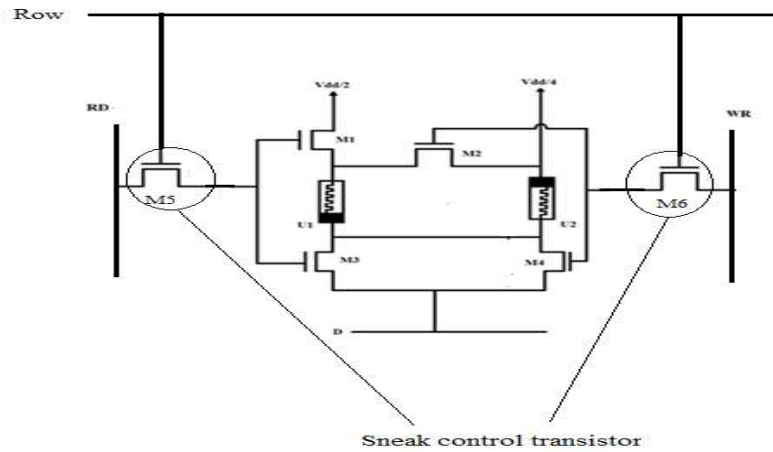


Figure 1: Hybrid Memristor-CMOS NVRAM Cell

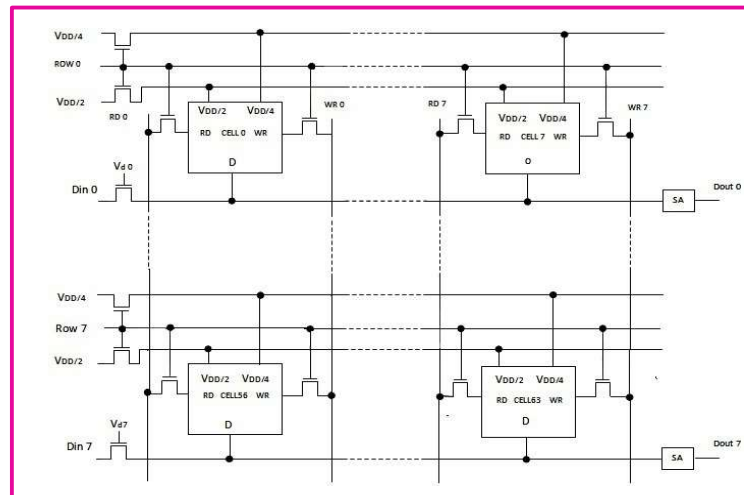


Figure 2: The 8x8 crossbar architecture with sneak current control

IPR Acknowledgement / Grant Certificate – Patent 201741037292



CIPCIS 2020: P- 192

Method of Removal and Recovery of Hexavalent Chromium from Effluents by Passive-Active Biological Process

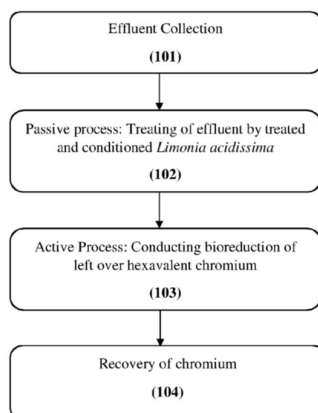
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ABSTRACT-A method of removal and recovery of hexavalent chromium from effluents by passive-active biological process is described. The method may include adsorption of the hexavalent chromium by passive biological process of removal of hexavalent chromium from effluents by adsorbing the hexavalent chromium using treated and conditioned *Limonia acidissima* biomass particles. The method may further include conducting bioreduction of the leftover chromium present in the effluent in low concentration by using active bacterial culture for complete removal of hexavalent chromium. The treated and conditioned *Limonia acidissima* biomass particles having the adsorbed hexavalent chromium may be burnt in the furnace at 400°C to obtain an ash containing hexavalent chromium. The ash obtained may be mixed with water and filtered to obtain a hexavalent chromium solution which could be recycled and reused.

DIAGRAM / SCHEMATIC – Schematic diagram of the hexavalent removal process



IPR Acknowledgement / Grant Certificate – The Indian Patent Office Journal No. 08/2019 Dated 22/02/2019; Application No. 201721007664 A, Publication date: 22/02/2019
WIPO/PCT International Publication No. WO 2018/158751 A1 Dated 07/09/2018
US Patent Application Publication No. US 2020/0002204 A1, Jan. 2, 2020
The Patent has also been filed in Russia, China and Japan.



CIPCIS 2020: P- 193

A system and Method for Encryption and decryption of text

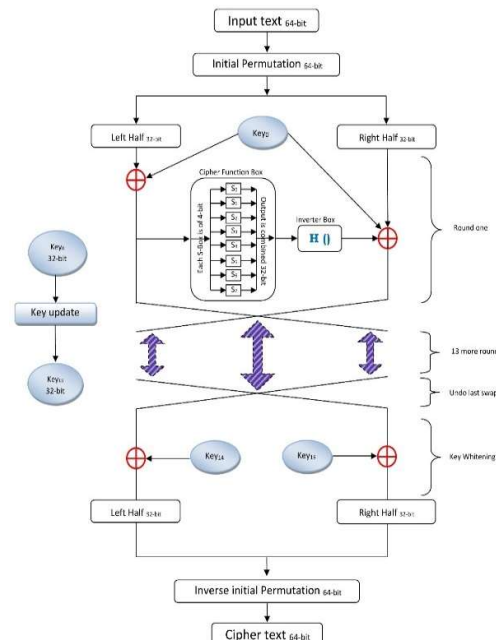
Hemraj Shobharam Lamkuche¹, Dhanya Pramod²

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ABSTRACT- A system for encryption and decryption of text is called a cryptographic system. There are various devices available such as Internet of Things (IoTs), Wireless Sensors Networks (WSNs), Embedded Devices, Power Constrained Devices, Smart cards and other devices which use cryptography for encryption and decryption of data. These devices are particularly vulnerable to cryptanalysis techniques such as differential power analysis, for obtaining side channel information during operation of the device. Many cryptanalysis techniques are widely available to obtain data from the power constrained devices during information transmission or information at rest. There are several lightweight cryptographic systems proved to be vulnerable against certain cryptanalytic attacks. However, existing systems and methods fails to provide an encryption and decryption technique applicable to lightweight block ciphers which is less vulnerable to cryptanalysis attacks and which consumes less hardware footprint. The invention will be helpful in providing security to power constrained devices used in IoT environment, experimentally it shows resistance against various known cryptanalytics attacks.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – WIPO International Publication Number: WO 2020/008446 A2 International Application Number: PCT/IB2019/059599



CIPCIS 2020: P- 194

Hybrid Compressed Air Drive System

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¹Assistant Prof. at DRGITR, Amravati, Maharashtra, India, patilpiyush101@gmail.com, 9975889972

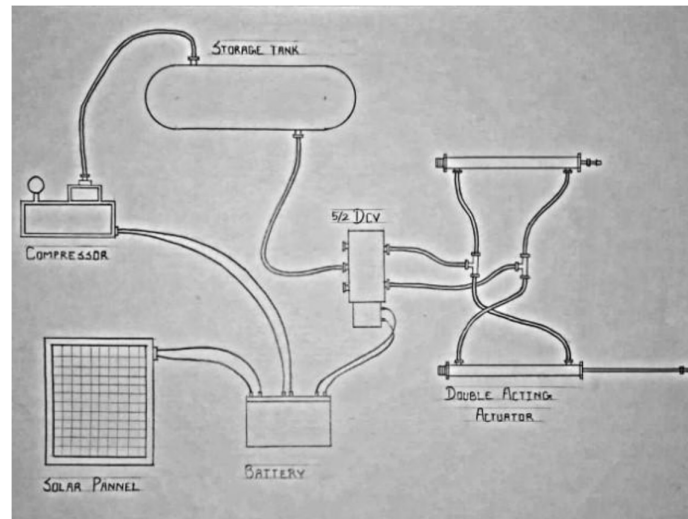
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ABSTRACT-The present disclosure relates to a compressed air driven vehicle while the compression of air is assisted by solar operated motor. The hybrid compressed air drive system include a solar panel connected to a battery to keep the battery charged. The battery powers a compressor and a solenoid actuated Directional Control Valve. The battery powered compressor continuously supplies air to the compressed air tank which is maintained at a pressure and supplies compressed air to the solenoid actuated Directional Control Valve. An Electronics Control Unit attached to the system controls the flow and supply of air to the Directional Control Valve as per need. The solenoid actuated Directional Control Valve is controlled by a Timer IC which controls the actuation of a pair of bidirectional pneumatic actuators which are actuated sequentially in order to rotate the sprocket attached to the pedal which in turns rotate the rear wheel.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – 201921023056

CIPCIS 2020: P- 195

Method and a System for detecting an intrusion on a Network

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ABSTRACT-A system and method for detecting an intrusion on a network is described herein. The system comprises a processor 201 and memory 203. The processor 201 may sniff and analyze a header data of each packet and further create a plurality of network events on the basis of a content of each packet. The processor 201 may identify a pattern of the plurality of network events in the network data flow using a knowledge based finite state machine. The identified pattern is then fed into an Incremental Probability Action Modelling (IPAM) engine to predict a next state in the identified pattern based on a probability of network events. The processor 201 may prepare a probability grid with the probability of the next state as a warning state. The processor 201 may generate, one or more alerts of the intrusion detection on the basis of prediction of the warning state.

DIAGRAM / SCHEMATIC

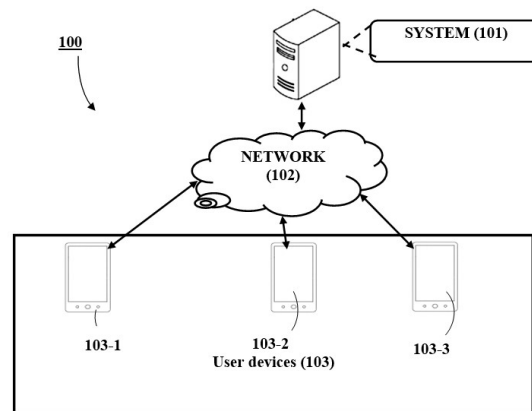


Figure 1

IPR Acknowledgement / Grant Certificate Indian Patent Office (IPO) IN 201821046234
United States of America Patent Office (USPTO) US 16/364,393



CIPCIS 2020: P- 196

Quad Bike Differential

Dr. Girish P. Deshmukh¹, Piyush A. Dalke², Sanjeeb R. Pal³, Harshal R. Sonawane⁴, Shreyash S. Sahare⁵, Omkar D. Raut⁶, Omkar R. Kothare⁷, Abhishek Sunil Kudke⁸

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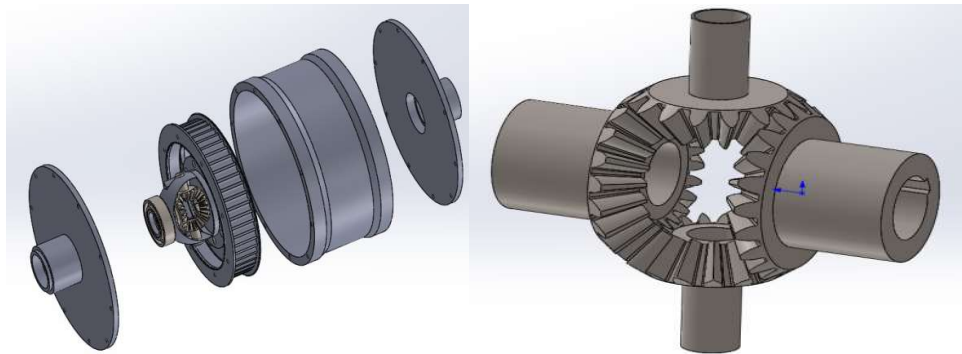
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ABSTRACT- A belt drive differential with an output shaft, two planet sprockets rotatably mounted to a carrier to orbit in a circular path about a carrier axis coaxial with the output shaft, a first output sprocket attached to an output shaft, and a toothed power transmission belt connecting the sprockets. A differential assembly in which a belt links gears on opposite sides of a carrier by idlers, which idlers are spaced to have synchronous interfitment of the belt teeth with the gear teeth and peripherally shaped to turn the belt flat for gear engagement with a minimum arc of partial engagement.

DIAGRAM / SCHEMATIC –



Explode View of Assembly

Differential Gear Assembly



Crown Wheel



Differential Holder

IPR Acknowledgement / Grant Certificate – Design no 328685-001, Date 31/03/2020



CIPCIS 2020: P- 197

Design and Development of Multi-size Stapler

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ABSTRACT- Stapler is a device used for fastening together sheets of paper with a staple or staples. It is one of the most widely used devices, which finds its use in household as well as commercial applications. However, in commercial workplaces, the proprietor has to switch between various sizes of staplers in order to staple varying number of pages. For instance, for stapling ten pages, a small stapler is enough; but for ninety pages, a heavy-duty stapler is essential. The operator suffers from fatigue of stapler-switching, which need to be eliminated. In order to resolve this problem, three different sizes of pins were incorporated in a single unit, hence making it a multi-size stapler. The sizes that were included in the proposed design, were believed to be most frequently used. In the proposed invention, the three most widely pins are integrated into a single unit; hence making it a multi-size stapler. Each of the three plungers (the part which applies the force onto the stapler), has been provided with two positions, one ON position and one OFF position. The plunger corresponding to the pin which is required to be stapled is kept in the ON position and other two plungers are kept in the OFF positions. The ON plunger will do the work of stapling the pin into the paper, and the two OFF plungers will perform an idle stroke during the actuation. In this way, the objective of stapling the desired pin into the paper is fulfilled. The proposed design of the stapler aimed to be flexible, portable and economical as compared to present day commercial stapler units. The pin sizes that were used most frequently and in unfluctuating requirement according to the survey done, are the ones included in the proposed design which makes the design a success. Generally, staplers are manufactured by conventional die-punch assemblies; but considering the high cost involved in die-punch manufacturing, the prototype was manufactured using alternate sophisticated machining process.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



IPR Acknowledgement / Grant Certificate – Design No. 285603, Date: 28/07/2016



CIPCIS 2020: P- 198

Abiotic stress in Banana

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ABSTRACT- The key issues that are to be addressed to sustain agriculture in the twenty First century are water availability, salinity and extreme temperatures. Bananas are staple food for hundreds of millions of people in Africa, And it is cultivated mostly in tropical and subtropical countries. In India, Bananas are grown in the regions of humid tropics, humid subtropics and semiarid tropics, and some banana genotypes can grow up to an elevation of 2000 MSL. Suitable climate for banana growth is warm moist weather Without strong winds throughout the year. The major constraints for Banana production are largely dominated by biotic and abiotic stresses. Though research on biotic stresses in banana has drawn sufficient attention worldwide, abiotic stresses are not. The successful cultivation of Water loving Cavendish clones, in drought prone areas with protected Irrigation, has provided the sufficient momentum to research on drought In bananas. Banana plants, especially the Cavendish clones, are sensitive To abiotic stresses like soil moisture deficit, salinity, extreme temperatures And strong winds. As bananas are recalcitrant to conventional breeding Approaches, clonal selection and tolerant genotype selections from germplasm are the major sources to address the abiotic stresses. In the recent Past, a lot of attention has been given to study the basic mechanisms Involved in tolerance and management of the abiotic stresses in banana and these aspects are discussed in this chapter.

DIAGRAM / SCHEMATIC – Abiotic stress in banana symptoms.



IPR Acknowledgement / Grant Certificate – The above all are my own article and my own words are used.



CIPCIS 2020: P-199

A Tooth Brush With Toothpaste Inside

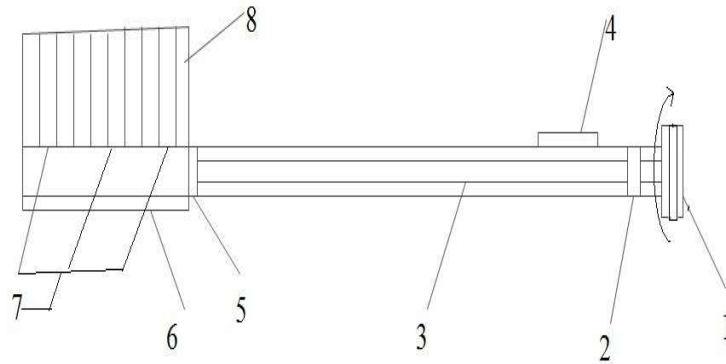
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

¹Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT-

A system for brushing teeth is designed, the said system have a regular toothbrush with a cavity in the handle for containing toothpaste, the said system have an opening for filling toothpaste in the handle, the said system have a mechanism for pushing toothpaste in forward direction, the said pushing mechanism is a lead screw and nut arrangement, the said arrangement push the tooth paste towards bristles, the said bristles have an opening at the base to admit toothpaste, the said opening allows the toothpaste to speed over the bristles

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. –

CIPCIS 2020: P-200

A System For Reduction Of Puncture In Tyres

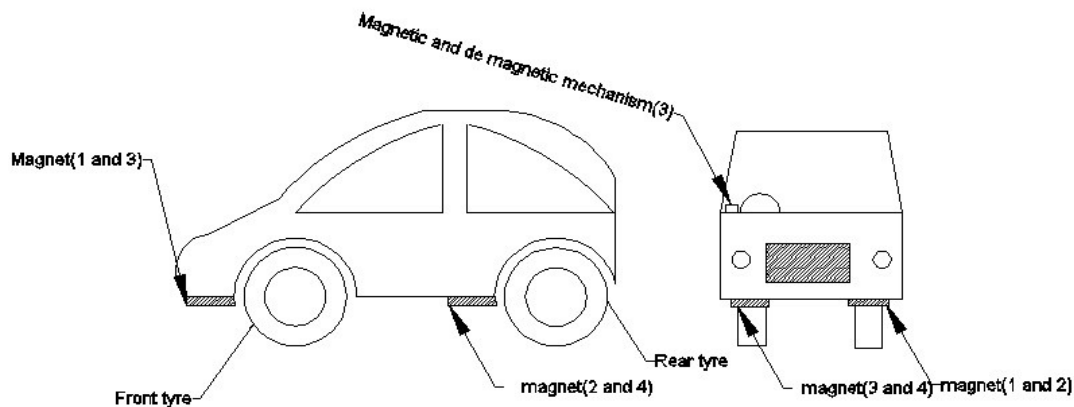
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

A system for reducing chances of puncture in automobiles, in the said system a technique is proposed, in which magnets are placed before the wheels of automobiles, said automobiles can be a two wheeler or a four wheeler. It is observed that tire of automobile get punctures mainly because of nails on the road, in the said system when magnets are placed before the tires; the said magnets attract nails from the road the nails will not come in contact with tires. The said technique will eliminate need of extra tire or stepney, this will reduce the overall cost and weight of the automobiles, further the time lost for removal of puncture is also saved. The number of magnets required in a two wheeler is two and in a four wheeler is four, the said magnets are to be placed in such a way that magnet should not touch the road at the same time it should attract nail or pointed steel materials from the road.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. –

CIPCIS 2020: P-201

A White Board Marker Pen For Smooth Writing On Inclined And Vertical Surfaces

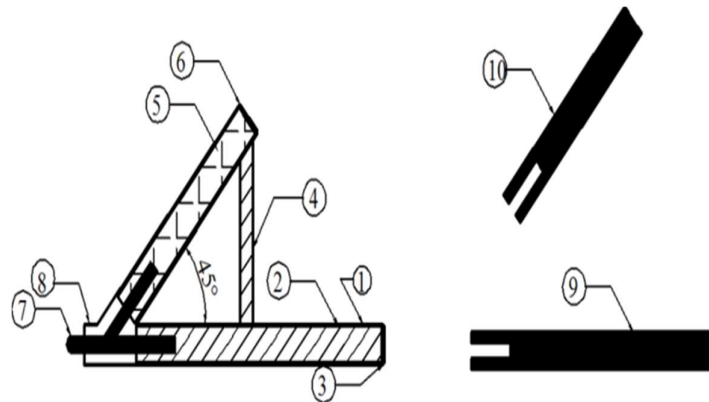
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

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ABSTRACT-

A white board marker pen is designed for writing on inclined and vertical planes or surfaces, the said pen has an additional ink storage space attached to the pen, and the said additional storage for ink is inclined when pen is horizontal. The ink is stored in inclined storage in conventionally used pad or refill, the said refill keeps on supplying ink when pen is writing on inclined or vertical surfaces, the said attachment is an alteration in a conventional whiteboard marker pen as shown in figure in complete specification section, the said refill is in addition to the main refill used in a conventional pen, when the said pen is writing on vertical surface the supply of ink from main refill is difficult as it will be against gravity, the supply of ink is in such case from inclined refill, the inclined storage space is attached to the body of a conventional pen in such a way that it improves the grip of the pen, the said pen will cost 20 to 30 % more than a conventional marker pen, the said pen gives continue and smooth writing on horizontal, inclined or vertical surfaces.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. –



CIPCIS 2020: P-202

A Water Cooling System For Two Wheelers Using Engine Exhaust Heat

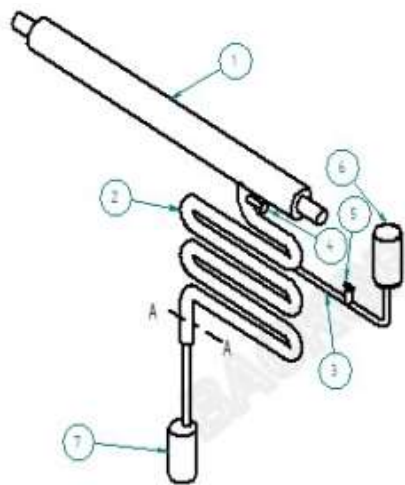
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

¹Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT-

A system for cooling of water on a two wheeler using engine exhaust heat, said system comprising: input means adapted to receive exhaust gas from said engine; adsorber adapted to receive exhaust gas from said input means, said receiving being controlled by a first valve, said adsorber being a shell and tube heat exchanger such that said exhaust gas passes through said tubes and refrigerant adapted to be compressed in said shell of said heat exchanger, wherein, adsorbing material of said adsorber is heated upon receipt of said exhaust gas thereby making refrigerant to come out of said adsorbing material; air cooled condenser coil(evaporator cum condenser coil) placed in series with said adsorber; the condenser coil is a double tube heat exchanger coil which act as a condenser as well as an evaporator; the refrigerant is cooled and becomes liquid in the condenser coil: the said condenser cum evaporator coil is connected to the adsorber through a control valve; said control valve allows the flow of refrigerant to condenser coil in heating mode; the said control valve is opened after some time and allows flow of refrigerant back to adsorber; the said flow back of refrigerant to condenser coil produces refrigeration; during said refrigeration water is flown throw inner tube for cooling; the said water can be used as cold water for drinking purpose.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. –



CIPCIS 2020: P-203

A System For Iron And Fabric

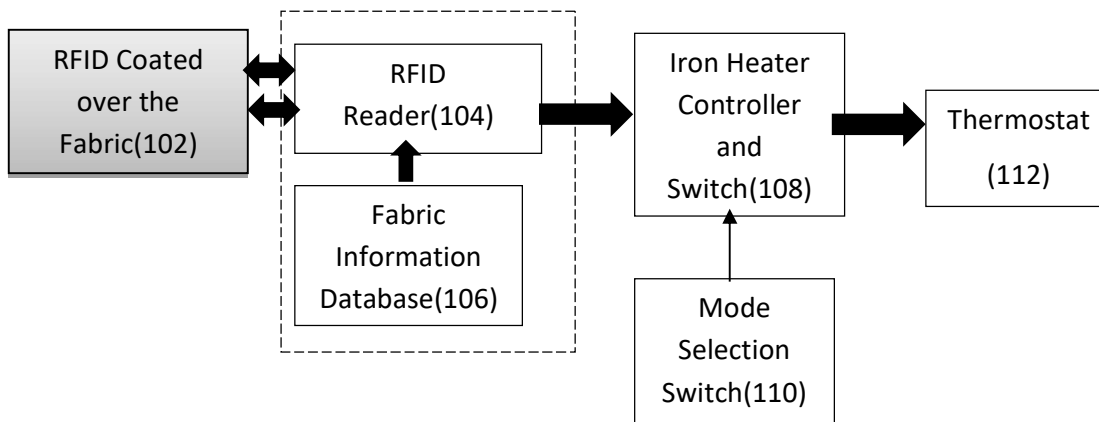
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

¹Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT-

Disclosed herein is an Autonomous Iron system (300) iron and ironing of fabric. The system (300) includes means determination and or identifications of the fabric material; and means for to set the required temperature to press a fabric smoothly. The ironing can be done efficiently as and after scanning the RFID sticker printed over the fabric and scanned RFID code will get matched with the fabric database to set the effective temperature handled by the cloth during the press with automatic decision of whether steam is required or not. The manual mode is also provided with a digital dial and a knob arrangement which is used to set the required temperature of the Iron.

DIAGRAM / SCHEMATIC -



IPR APPLICATION / PATENT NO. -



CIPCIS 2020: P-204

Shaving Razor With Shaving Foam Gel Inside The Handle

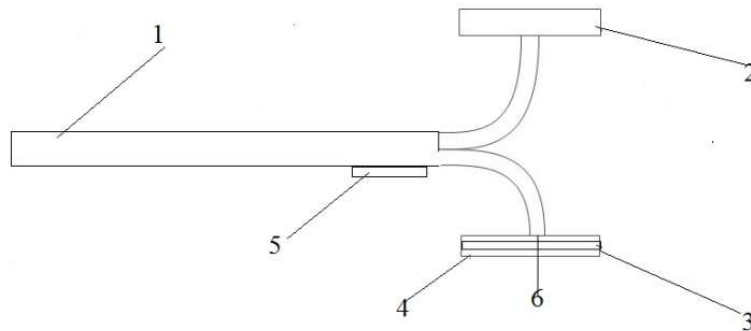
Harish Umashankar Tiwari¹, Amruta Harish Tiwari²

¹Prof. & Principal, PimpriChinchwad College of Engineering & Research, Ravet, Pune 412101, (MS) India, harish.tiwari@pccoepune.org.

ABSTRACT-

A shaving razor with a provision for containing pressurized shaving foam producing liquid is designed, the said razor have a cavity in the handle for containing pressurized liquid, the pressurized liquid is a shaving foam producing liquid, the said liquid flow is controlled by operating a knob, the said knob is fitted on the handle, the said shaving foam is sprayed over a pad, the said pad is fitted behind the blade of the razor, the said pad is fitted with a set of smooth bristles, the said pad is having an opening for flowing the shaving foam at the base of the pad, the said razor blade system contains around 8 to 10 ml pressurized shaving foam liquid.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. –

CIPCIS 2020: P-205

Vibration Absorber System For Controlling/ Minimizing Vibrations

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ABSTRACT-

A vibration absorber system, coupled with a vibrating component, comprises a magneto rheological element. The magnetorheological element comprises a magneto rheological elastomer block, and at least one shape memory alloy element embedded in the magneto rheological elastomer block, wherein the shape memory alloy element is in electrical communication with a power source. The vibration absorber system further comprises an electromagnet disposed proximal to the magneto rheological element such that the magneto rheological element is positioned operatively between the poles of the electromagnet. The stiffness of the magnetorheological element can be varied by the application of at least one of a magnetic field via the electromagnet and increasing the temperature of the shape memory alloy element by an application of voltage using said power source.

DIAGRAM / SCHEMATIC –

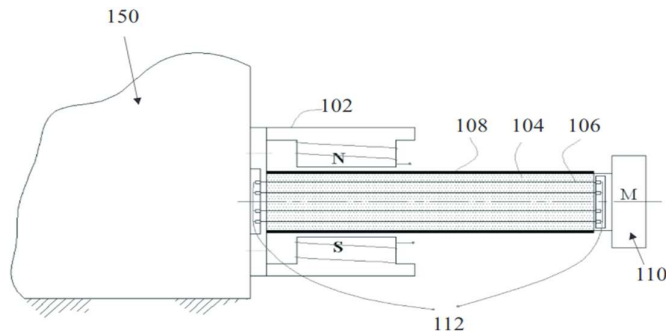


FIGURE 1

IPR APPLICATION / PATENT NO. – 2605/MUM/2014



CIPCIS 2020: P-206

Adjustable And Automated Treatment Platform Of Dynamic Back-Bending-Bench For Physiotherapeutic Treatment

DIVEKARDHANAJAY DATTATRAY

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DESHPANDE PRASHANTPRALHADDR

House No. 1394/9, Near Adarsh Balak Mandir School, Urun, Islampur - 415 409; Taluka:Walwa, District:Sangli, Maharashtra State, India

BHAGWAT SANDEEP LAXMAN

82, Vishal Nagar, Jule Solapur, Maharashtra State, India

ABSTRACT-

The invention relates to new dynamic back-bending- bench to be used in physiotherapeutic treatment of patients having spinal disorders providing incremental passive spinal extension in human body and also used in physiotherapeutic exercise done by healthy individuals for maintain spinal flexibility therof. Owing to the fixed structure of the existing back-bending-bench, assistance of other persons is required by the therapist to provide small incremental extensions needed by the physically impaired patient, which cannot be done by the patient himself. This makes the treatment more laborious and expensive. The present invention of new dynamic backbending-bench does not have one fixed structure. Instead, different shapes of top surface-profiles giving incremental modifications can be created by using plurality of mechanical linkages, flats, platforms, and horizontal and vertical linear actuators. Thus the physically impaired patient can be easily provided with small incremental extensions to the back-bone of the patient,bythe physiotherapist.

DIAGRAM / SCHEMATIC –

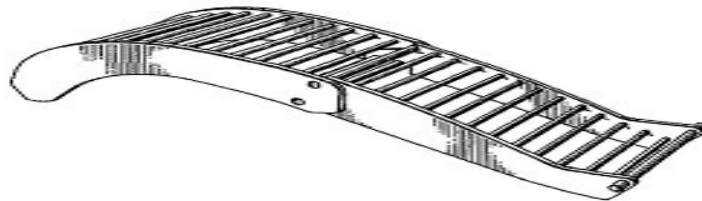


Figure 1

IPR APPLICATION / PATENT NO. – 265/MUM/2013



Pimpri Chinchwad Education Trust's
PIMPRI CHINCHWAD COLLEGE OF ENGINEERING AND RESEARCH,
Laxminagar, Ravet, Pune-412101 (Maharashtra)
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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-207

An Apparatus For Heart Blockage Diagnosis

A.B Kakade

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B.S . Shete

Sonai, 4/2, Sankalp Colony, Ajantha Chowk, near samrat motors, Godoli, Tal. & Dist. Satara, Maharashtra, India, PIN-415 004

Shailesh Kuthe

255/1, Subhash ward, Salai (Bujruk), At Post-Khapa, Taluka-Mohadi, Dist-Bhandara-441 912, Maharashtra, India.

Manoj Lonkar

1335, Lonkar mala, at post-Supa, Taluka-Baramati, Dist-Pune-412 204, Maharashtra, India.

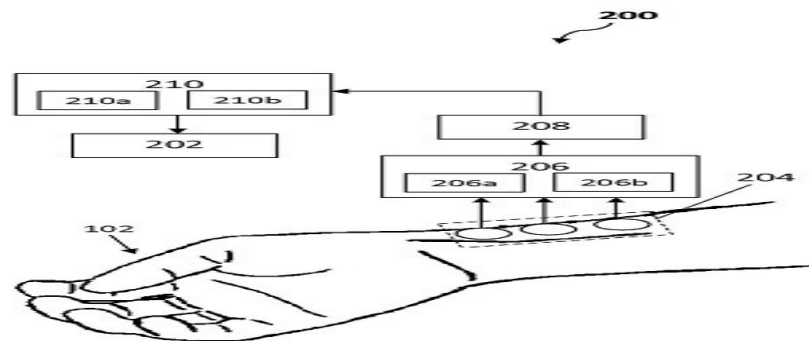
Kulkarni Sourabh Shekhar

'Ramashailya', Near Nirmala Hall, Mahadevnagar, Islampur, Tal.Walwa, Dist. Sangli. Maharashtra, India, PIN- 415409.

ABSTRACT-

The present disclosure envisages an apparatus for diagnosing cardiac related abnormalities in a patient. The apparatus comprises a repository that stores discrete pulse waveforms with identified features and threshold values related to a patient suffering from at least one cardiac related abnormality including a cardiac artery blockage. A plurality of sensors are placed on the radial artery of the patient to sense pulses of the patient, and generate corresponding pulse signals. These pulse signals are conditioned and converted into digital signals. The digital signals are then analyzed to detect a plurality of features and their values which are then compared with the features and threshold values stored in the repository to diagnose and determine at least one cardiac related abnormality

DIAGRAM SCHEMATIC –



IPRAPPLICATION/ PATENT NO. – 3211/MUM/2014

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-208

Electronic Geometric Compasses

S.R. JAGTAP

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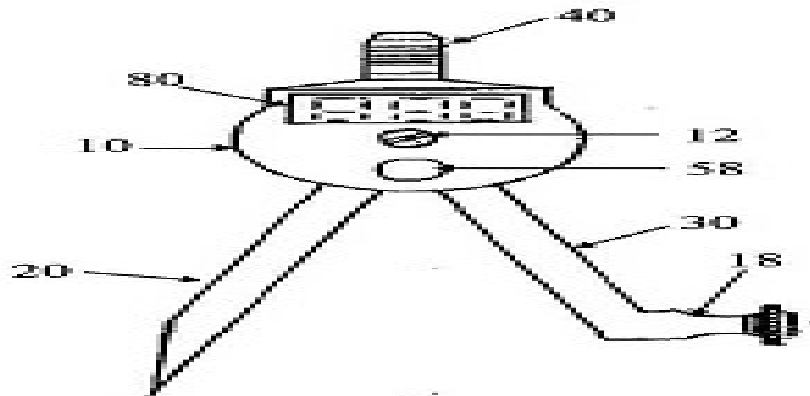
RAJARAMBAPU INSTITUTE OF TECHNOLOGY

Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India

ABSTRACT-

An electronic geometric compass comprises a housing, a first and a second arm having an first operative end portion and a second operative end portion with a first and a second rotatable member having a pivot opening for receiving shafts are disposed at the second operative end portion of the first and second arms. Further, a sensor, a convertor, a processor and a display are disposed in the housing, wherein the sensor measures angular displacement of at least one of the first and second rotatable members, the convertor the measured angular displacement into a digital format and the processor receives, stores and processes the digital data into the user-defined format, which may be one of a length between the point tips of the first and second arms and angle between the first and second arms. The display unit displays the processed digitized angular displacement data in the user-defined format.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 3363/MUM/2013



CIPCIS 2020: P-209

Hinge System

A.C. ATTAR

'Hariyali' Sanmitra Housing Society, At.Po.Kasegaon Tal. Walwa Dist. Sangli, Maharashtra, India, Pin 415404

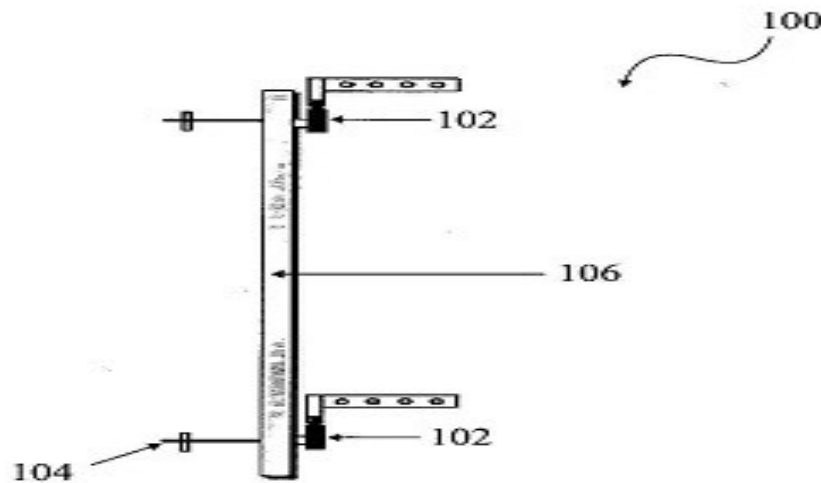
RAJARAMBAPU INSTITUTE OF TECHNOLOGY

Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India

ABSTRACT-

A hinge system includes: ?a longitudinal element secured to a structure; and ? at least one hinge assembly disposed on the longitudinal element; o the hinge assembly comprising: ? first and second barrels having a longitudinally outwardly extending pintle element and a longitudinally inwardly extending bore formed on first operative ends thereof; ? first and second elongate engaging elements connected to first and second barrels at first ends thereof and connected to the longitudinal element at second ends thereof; wherein the longitudinally inwardly extending bore and the longitudinally outwardly extending pintle element are complementary to each other and the longitudinally inwardly extending bore rotatably and removably receives at least a portion of a corresponding longitudinally outwardly extending pintle element to facilitate an angular displacement between the first and second barrels to facilitate angular displacement of the wing with respect to the structure.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 3364/MUM/2013



CIPCIS 2020: P-210

Hinge System

A.C. ATTAR

'Hariyali' Sanmitra Housing Society, At.Po.Kasegaon Tal. Walwa Dist. Sangli, Maharashtra, India, Pin 415404

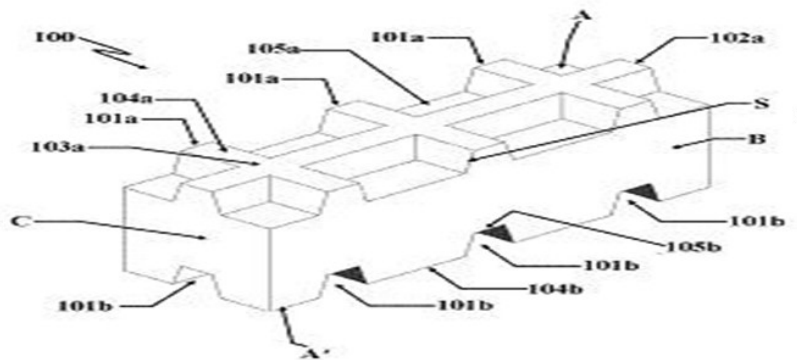
RAJARAMBAPU INSTITUTE OF TECHNOLOGY

Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India

ABSTRACT-

A hinge system includes: ? a longitudinal element secured to a structure; and ? at least one hinge assembly disposed on the longitudinal element; o the hinge assembly comprising: ? first and second barrels having a longitudinally outwardly extending pintle element and a longitudinally inwardly extending bore formed on first operative ends thereof; ? first and second elongate engaging elements connected to first and second barrels at first ends thereof and connected to the longitudinal element at second ends thereof; wherein the longitudinally inwardly extending bore and the longitudinally outwardly extending pintle element are complementary to each other and the longitudinally inwardly extending bore rotatably and removably receives at least a portion of a corresponding longitudinally outwardly extending pintle element to facilitate an angular displacement between the first and second barrels to facilitate angular displacement of the wing with respect to the structure.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 3364/MUM/2013



CIPCIS 2020: P-211

Automatic Agricultural Chemical Sprayer

AWATI JAYASHREE SUDHIR

'Deccan' Molasis Compound, At Post-Karandwadi, Taluka-Walwa, District-Sangli, Maharashtra 416301

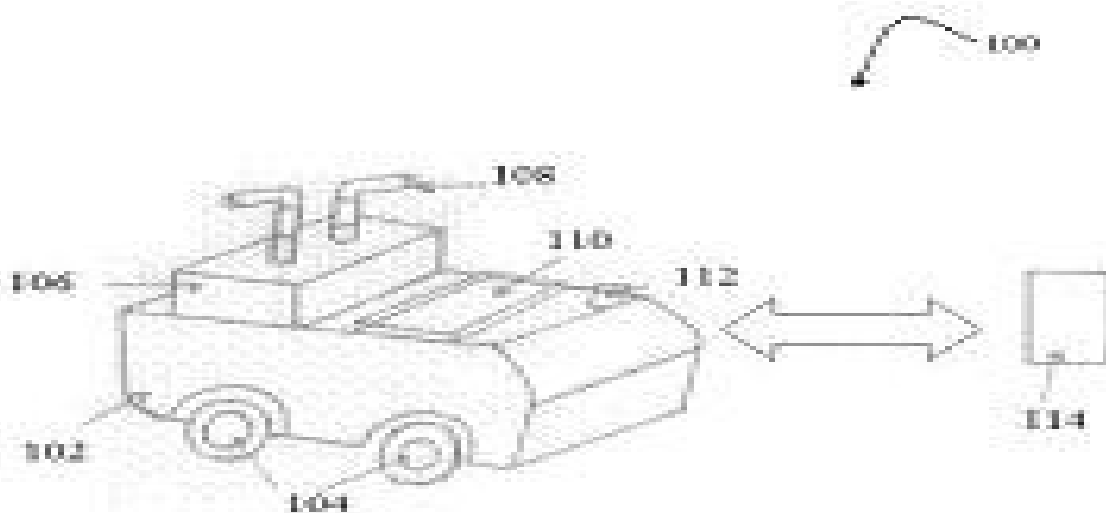
RAJARAMBAPU INSTITUTE OF TECHNOLOGY

Rajaramnagar, Islampur, Distt. Sangli, 415414, Maharashtra, India

ABSTRACT-

A spraying system includes a vehicle, a tank, a pump, at least one sprinkler, at least one sensors and a control unit. The tank is mounted on chassis of the vehicle and hold fluid to be sprayed. The pump pressurizes the fluid held inside the tank. The sprinkler is disposed on the tank and in fluid communication with interior of the tank. The at least one sprinkler adjustably sprays fluid at different heights. The least one sensors are configured on the vehicle and detects parameters associated with the vehicle, the tank, the pump, the sprinkler and other external conditions. The control unit is functionally coupled to various elements of the spraying system and the sensors and interacts with a remote control via a wireless communication network for facilitating remotely controlling movement of the vehicle and operation of the pump and the least one sprinkler.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 3867/MUM/2013



CIPCIS 2020: P-212

Tracking System For Vehicles With People Flow Management

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M.S. Kumbhar

A/P - Borgaon, Tal-Walwa Dist - Sangli-Maharashtra 415413

RAJARAMBAPU INSTITUTE OF TECHNOLOGY

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ABSTRACT-

The present disclosure discloses a computer implemented vehicle tracking and passenger flow management system. The system utilizes a network having integrated communication with the inter-connected micro-controllers, readers/sensors, and display relevant information a display units associated with a vehicle unit, a vehicle-stop unit and a vehicle-station server, cooperating with each other for retrieving information related to a vehicle unit such as vehicle arrival time, distance travelled by the vehicle, distance yet to be covered by the vehicle and the like. Further, conveying the aforementioned information to the interested parties or passengers. The overall function of the proposed system is to improve decision making, often in real time thereby improving operation of the entire transport system.

DIAGRAM / SCHEMATIC –

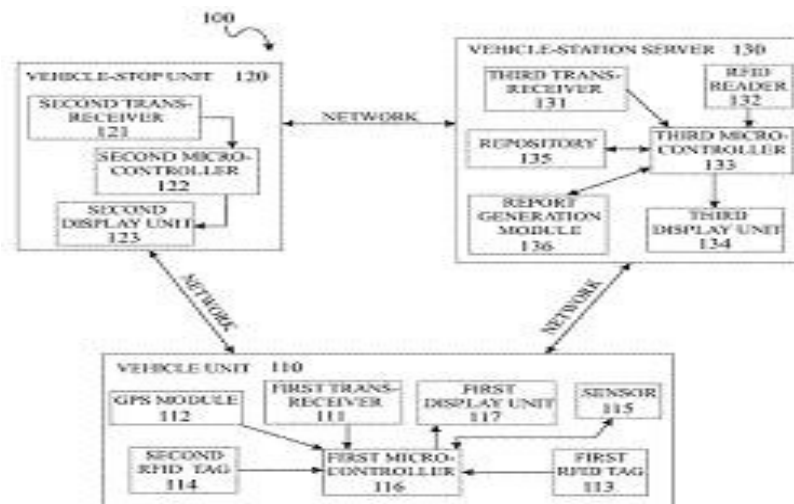


FIGURE 1

IPR APPLICATION / PATENT NO. – 4087/MUM/2013



CIPCIS 2020: P-213

Electronic Baby Cradle

M.S. Patil

Mauli, 1047, Buda Scheme, Sahyadrinagar, Belgaum, Karnataka, India

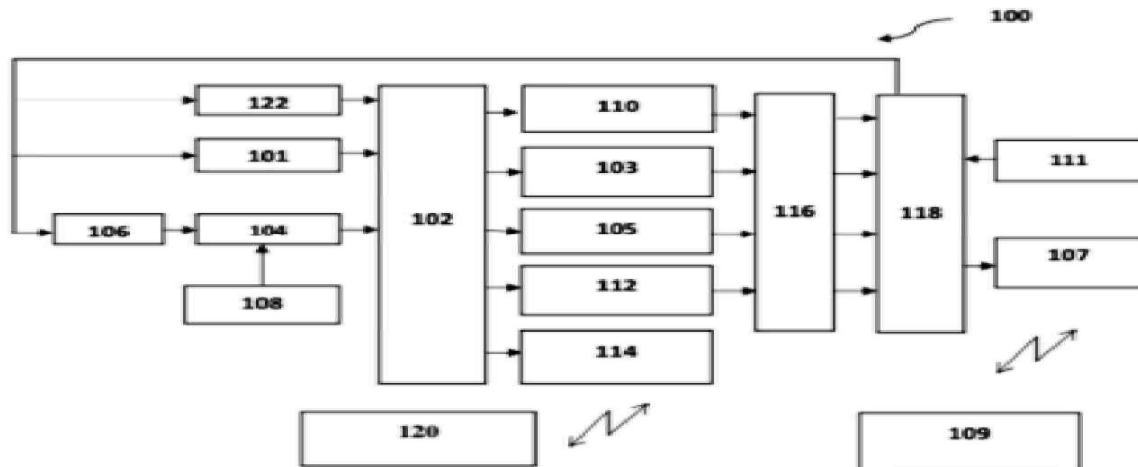
RAJARAMBAPU INSTITUTE OF TECHNOLOGY

Rajaramnagar, Islampur, Sangli-415414, Maharashtra, India

ABSTRACT-

An electronic baby cradle is disclosed and includes a cradle, an actuating mechanism, a power source, a proximity sensor, a voice recorder and play circuit device, an audio sensor, a humidity sensor, a posture sensor, a signal amplifier, a controller device, a camera and a display unit. The proximity sensor detects the presence of the baby in the cradle. The voice recorder and play circuit device produces audible voice when the baby is crying. The controller device either actuates the actuating mechanism or generates an alarm. The humidity sensor signals for generating the alarm. The posture sensor signals for generating the alarm while the baby is in at least one of a sitting posture and a standing posture. The audio sensor signals for actuation of the actuating mechanism. The camera enables capturing visuals of the baby for enabling remote monitoring of the baby through the display unit.

DIAGRAM / SCHEMATIC



IPR APPLICATION / PATENT NO. – 91/MUM/2014



CIPCIS 2020: P-214

A Concentrated Solar Pv Thermal Energy System

More Supriya Sagar

A/P - Thanapude, Taluka - Walawa, District – Sangli - 415412, Maharashtra, India

Govind Swami Ravindranath

148, Shreya, 7th Main, 8 thcross, Canara Bank Layout, Near SahakamagarVidyaranyapura Post, Bangalore.560097, Karnataka, India

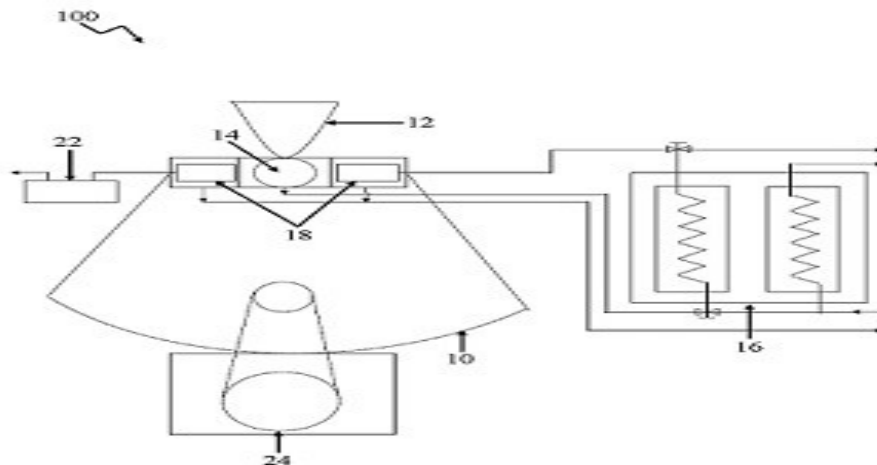
More Sagar Eknath

A/P - Thanapude, Taluka - Walawa, District – Sangli - 415412, Maharashtra, India

ABSTRACT-

The present disclosure relates to an integrated solar system. The integrated solar system comprises a primary mirror including a parabolic reflective surface and at least one flat reflective surface, a secondary mirror, a thermal energy storage system, and at least one photo-voltaic cell. The primary mirror is adapted to receive and reflect electromagnetic radiations. The secondary mirror is adapted to receive the electromagnetic radiations reflected from the parabolic reflective surface, and concentrate the electromagnetic radiations on an absorber tube, thereby heating a fluid circulated in the absorber tube to obtain a heated fluid. The thermal energy storage system is adapted to receive the heated fluid and store the thermal energy contained in the heated fluid therewithin. The photo-voltaic cell receives the electromagnetic radiations reflected from the flat reflective surface and converts the received light energy into a DC signal.

DIAGRAM / SCHEMATIC



IPR APPLICATION / PATENT NO. –1459/MUM/2015



CIPCIS 2020: P-215

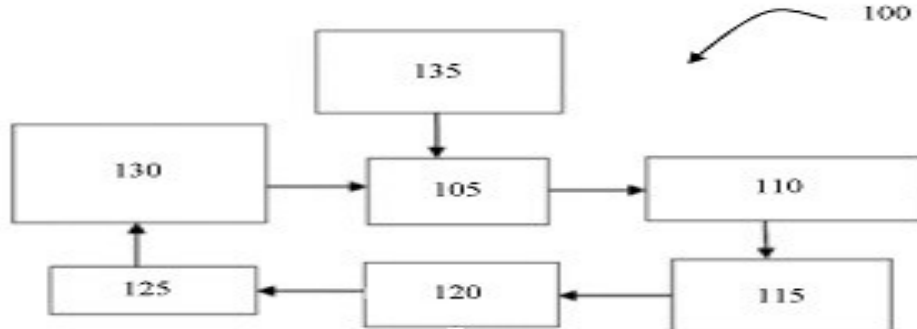
Automatic Bhel Vending Machine

Anand Kakade

ABSTRACT-

The present disclosure envisages a weed removal system for removing weed from the roots. The weed removal system comprises a radio-frequency generator, an antenna, and a detecting and controlling unit. The radio-frequency generator of the weed removal system is configured to generate high power radio-frequency signals. The antenna of the weed removal system is coupled with the radio-frequency generator and is configured to transmit the generated high-power radio-frequency signals toward the roots of the weed. The detecting and controlling unit of the weed removal system is configured to monitor the position of the antenna to generate position signals and further configured to control the generation of high power radio-frequency signals by the radio-frequency generator based on the position signals. The weed removal system further includes a high voltage power source which is configured to provide high voltage power to the radio-frequency generator.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 1453/MUM/2015



CIPCIS 2020: P-216

A Cutter Assembly For A Crop Harvester

Salunkhe Sureshroa Anandrao

A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur – 415409, Tal.-Walwa, Dist –Sangli, Maharashtra, India

Deshpande Prashant Pralhad

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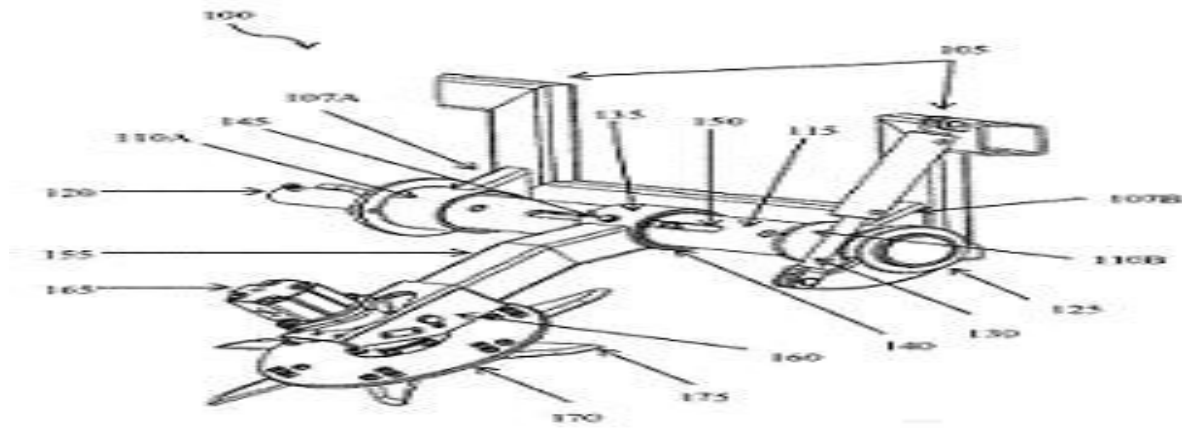
Salunkhe, Sonalkumar Sureshroa

A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur – 415409, Tal.-Walwa, Dist –Sangli, Maharashtra, India

ABSTRACT-

A cutting assembly for a crop harvester, wherein the cutting assembly comprises a cutting wheel assembly consisting of at least one cutting wheel having at least one cutting blade, a bracket fitted on the cutting wheel assembly, a power source fitted within the bracket for driving the cutting wheel(s), a support arm, a guide bush, a guide pipe that guides the reciprocation motion of guide bush in a controlled manner, a guide bush pin fitted within the guide bush, and a slit on the body of the guide pipe for accommodating the guide bush pin for restricting the guided reciprocating motion. The cutting assembly further comprises a displacing mechanism for angular and lateral displacement of the guide pipe and cutting wheel assembly, and a control mechanism for controlling the angular and lateral displacement of the guide pipe and cutting wheel assembly.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 3596/MUM/2015



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Laxminagar, Ravet, Pune-412101 (Maharashtra)
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CIPCIS 2020: P-217

A Bundling System And Method

Salunkhe Sureshroa Anandrao

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House No.1394/9, Near Adarsh Balak Mandir School, Islampur - 415409, Tal.-Walwa, Dist.-Sangli, Maharashtra State, India.

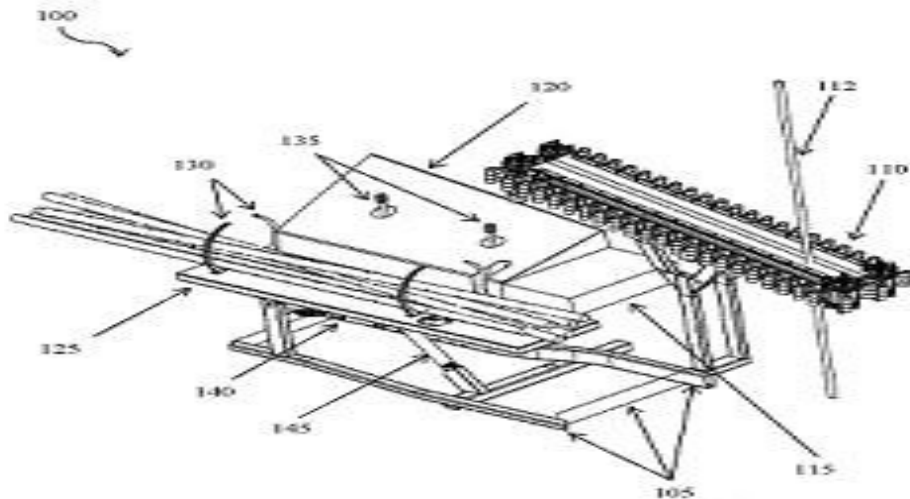
Salunkhe Sonalkumar Sureshroa

A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur – 415409, Tal.-Walwa, Dist –Sangli, Maharashtra, India

ABSTRACT-

A bundling system and method for bundling articles, wherein the bundling system and method comprises a conveying mechanism for conveying articles to a bundling station, a bundling platform that is configured to receive the articles from the bundling station, a load cell configured to measure the weight of the articles that are received on the bundling platform, a first actuator actuating at least one grabber that is configured to bundle the weighed articles together and a second actuator actuating at least one buffer stopper provided between the bundling station and the bundling platform, configured to restrict the reception of articles on the bundling platform. The bundling system and method further comprises a tying mechanism to tie the bundled articles held together by the grabber(s), and an unloading mechanism configured to unload the tied articles from the bundling platform.

DIAGRAM / SCHEMATIC -



IPR APPLICATION / PATENT NO. – 3597/MUM/2015

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-218

A Conveyor System

Salunkhe Sureshroo Anandrao

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Deshpande Prashant Pralhad

House No.1394/9, Near Adarsh Balak Mandir School, Islampur - 415409, Tal.-Walwa, Dist.-Sangli, Maharashtra State, India.

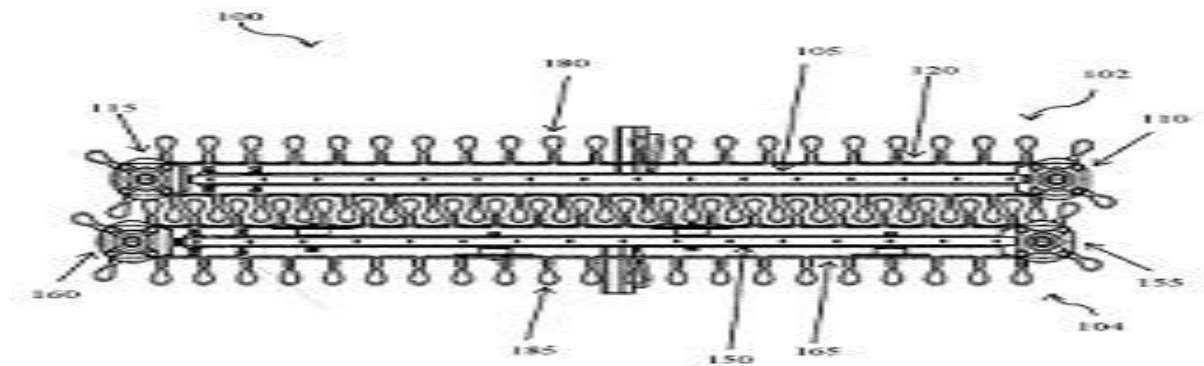
Salunkhe Sonalkumar Sureshroo

A/P-Bahe. Works: Plot No.-B-12, M.I.D.C., Islampur – 415409, Tal.-Walwa, Dist –Sangli, Maharashtra, India

ABSTRACT-

A conveyor system for conveying articles from a first location to a second location, wherein the conveyor system comprises a first endless belt and a second endless belt placed adjacently to the first endless belt such that the first endless belt and the second endless belt are configured to rotate in opposite directions. The conveyor system further comprises at least one resilient holding fixture extending from the first endless belt and the second endless belt, wherein the resilient holding fixture(s) of the first and second endless belt have complementary configuration and are configured to mesh with each other. A plurality of independent segments on each of the resilient holding fixture(s) is formed by cutting or dividing each of the resilient holding fixtures(s). The resilient holding fixture(s) of the conveyor system is in the form of a loop or a block or a plate.

DIAGRAM / SCHEMATIC -



IPR APPLICATION / PATENT NO. – 3498/MUM/2015



CIPCIS 2020: P- 219

Control unit of Electric Assisted steering

Ashutosh Jagdale, Ravi Ghule, Pall Choudhury, Simran Shaikh, Prof. Nivedita K

¹Alard College of Engineering and Management,Pune,India,jagdaleashutosh1998@gmail.com , 8796451664

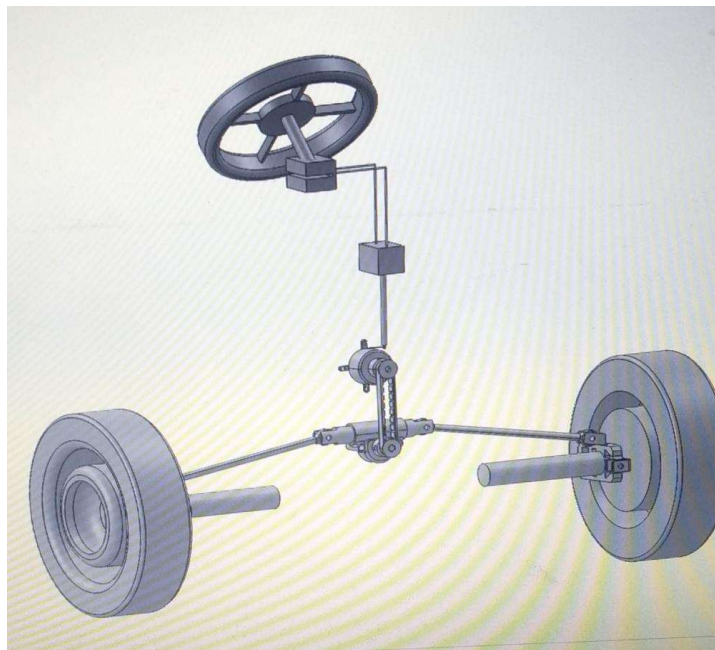
¹Alard College of Engineering and Management,Pune,India, ravighule1203@gmail.com ,8600581767

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ABSTRACT-Electric Assisted Steering system is an Electric System, which reduces the amount of steering effort by directly applying the output from the electric motor to the steering system.In this system the mechanical link between the steering wheel and road wheels of an automobile are replaced by a control system consisting of sensors, actuators and controllers seem to offer great advantages such as enhanced system performance, simplified construction, design flexibility etc. It offers greater vehicle safety by adapting variable steering ratios to human needs, filtering drive train influences and even adjusting active steering torque in critical situations. In addition, it can make cars even lighter and more fuel efficient when compared to those using hydraulic steering systems.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.





CIPCIS 2020: P- 220

A product for reducing corruption, accidents, traffic on highways also checking the highway rules and reducing the waiting time on toll plaza with the help of digitization in highway administration system

Prashant¹

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ABSTRACT- The current highway administration system have some flaws of human errors, late response to accidents and involves corruption, as there are liquid cash transactions. In our System our main aim is to reduce the traffic and accidents on highways and to reduce corruption in highway administration system by eliminating cash transactions. There is also a main advantage that we are providing security to the QR code by mapping techniques. The proposed system will be QR based digitalization of toll plaza and highway rules validation in which the toll amount will be deducted automatically from the vehicle owners account by scanning the Encrypted QR code which will be placed on the vehicles front screen and the fine amount also will be deducted if user has violated any of the highway rules. User have to register his/her vehicle on our website so the system will validate the information and then the system will give password protected QR code for that particular vehicle , at the same time user also needs to register his/her bank account by providing correct banking information. This system will result into reduced waiting time on tolls as the payment method is much faster than what was the previous one , rules will be followed sincerely , as if the rule is violated fine amount is going to be deducted when the vehicle will arrive at any of the toll. It will result into reduced number of accidents .The system will also provide prepaid recharge option where the user just have to enter source and destination and the system will show the tolls between them ,then user will get the option to pay the toll amounts in advance

IPR Acknowledgement / Grant Certificate – 201721011649



CIPCIS 2020: P- 221

A speed control of dc motor using rf Communication

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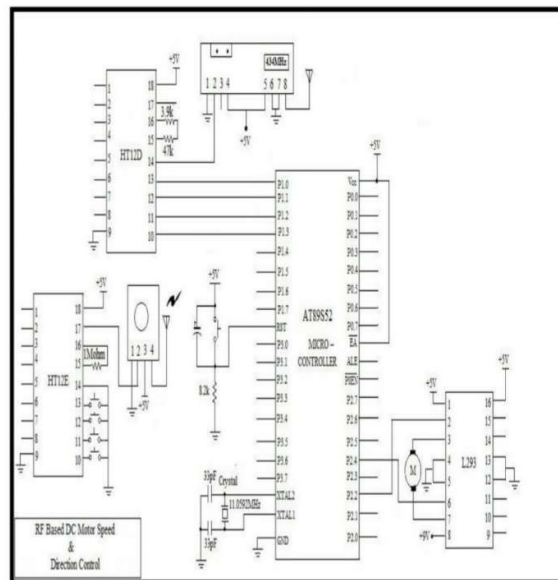
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ABSTRACT- DC motors are used in various applications due to its speed, cost, low maintenance etc. It will be advantageous to develop a system, which uses RF communication to control the speed of dc motor without any wire communication .Which executes with respect to signal sent by the RF transmitter. There are several application with dc motors in our daily life obviously there exists many applications where there might be a need to control the speed of dc motors. There exists many ways of controlling the speed of DC motor. Of the available ones, PWM technique is the most efficient one for controlling speed as well as energy saving.

DIAGRAM / SCHEMATIC —





CIPCIS 2020: P- 222

Intelligent Bumper & Breaking System

Onkar Divakar kulkarni ¹, Prithviraj Ramesh sawant², Umesh Dilip Kamble³ , Sanchit Pradip Ghodse ⁴, Prof. Reshma Patil ⁵

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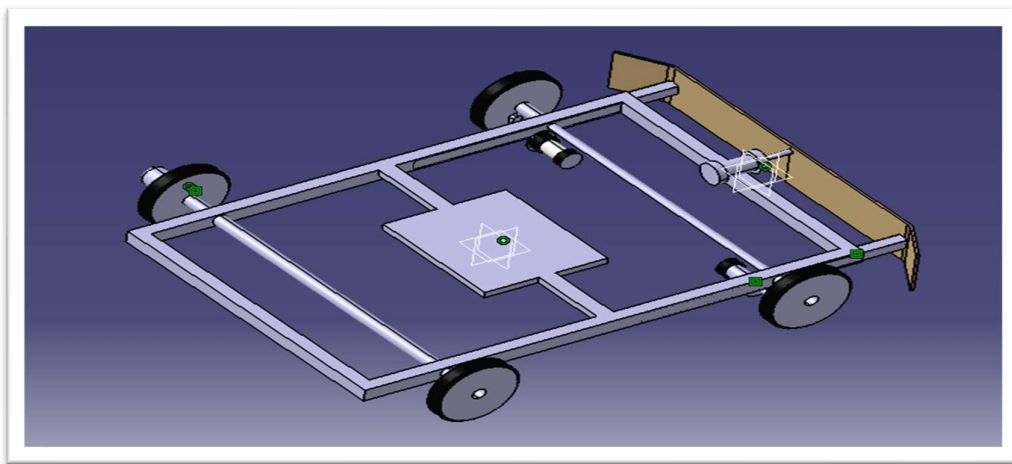
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ABSTRACT- In today's world automation is increasing day by day which includes Pneumatic technology, it had gained tremendous importance from adulthood & coal mining to modern machines like heavy machinery's & even in space robot's. to surf along with the study or marketing research one should must have knowledge in pneumatic system. The main course of this project is to review on pneumatics' and to relate the subject within the project. therein case we designed and fabricated Intelligent electronically controlled automotive bumper activation called "PNEUMATIC BUMPER & BRAKING SYSTEM". This system features a ARDUINO UNO as a micro controller, IR transmitter & Receiver circuit & Pneumatic actuators used as braking & bumper system. Now a day's accident may be a huge problem especially in INDIA due to improper construction of road and tracks. to beat this problem this project helps in minimizing the accidents & greatest damage to the person if accident takes place The project is combination of the mechanical and Electronics, which is fairly referred to as the Mechatronics. The upcoming world is filled with Automation so we'd like to develop 'a system which is fully automatic. So, we develop this project for handicapped people to travel smart across the planet using "Intelligent Wheel Chair". Now each day vehicle accident is that the major problem. it's the project which has been fully equipped and designed for auto vehicles. The technology of Mechatronics plays a serious role within the field of automation and modern machine shops and space robots

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.





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CIPCIS 2020: P- 223

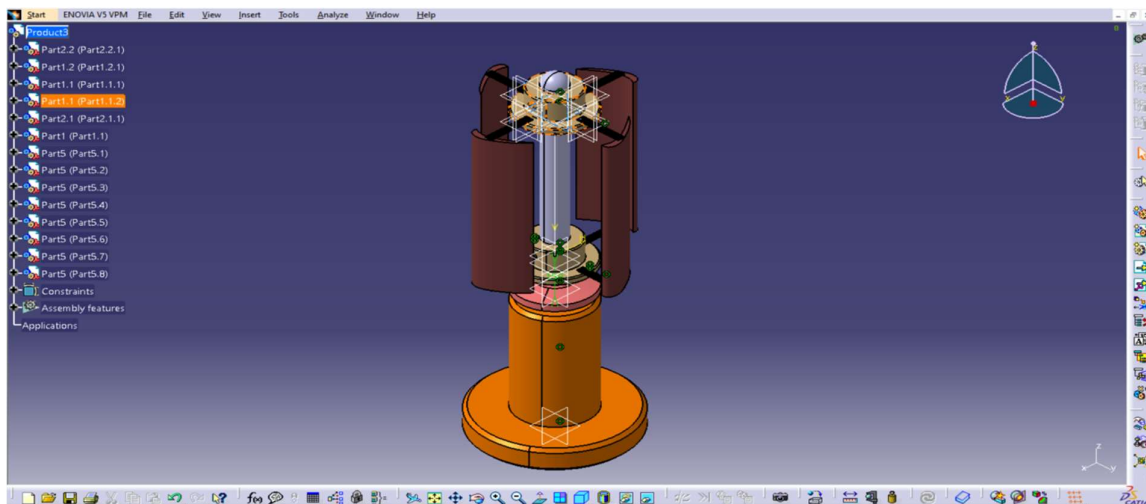
Traffic Powered Wind Turbines

**Mahesh Y. Miththa , Prathmesh P. Malwankar , Amruta N. Dange , Omkar D. Padwal
, Prof. Reshma Patil**

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ABSTRACT :- Nowadays, as technology, science and population are increasing and getting more and more advance a day , scientist consider manipulating renewable energies because nonrenewable energies are running call at the planet and wishes many years to supply again. the most sort of renewable energy is wind and this wind are often converted to electricity by the assistance of turbine . Wind energy may be a promising scheme within the power generation sector thanks to pollution-free power production and wind resources' sufficiency worldwide. Installing wind turbines altogether the possible extents can mitigate the rising energy demand. The K.E. of the wind are often become other sorts of energy, either in Mechanical or electricity . The K.E. contained within the wind are often transformed into electricity through turbine generators. With the continual increase in fuel prices & demands for cleaner energy sources, windmills are getting a more suitable technology for electric power generation. As an application of Street Light, windmills are often utilized as an influence source using vertical axis windmills. Built-up areas possess high potential for wind energy, including the rooftop of high-rise buildings, railway track, the region between or around multi-storeyed buildings, and city roads. Harnessing wind energy from these areas is sort of challenging since it's dramatic nature and turbulence for higher roughness on urban surfaces. This review paper endeavour to spotlight this status urban wind park technology and its commercial and environmental aspect.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



IPR Acknowledgement / Grant Certificate –

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P- 224

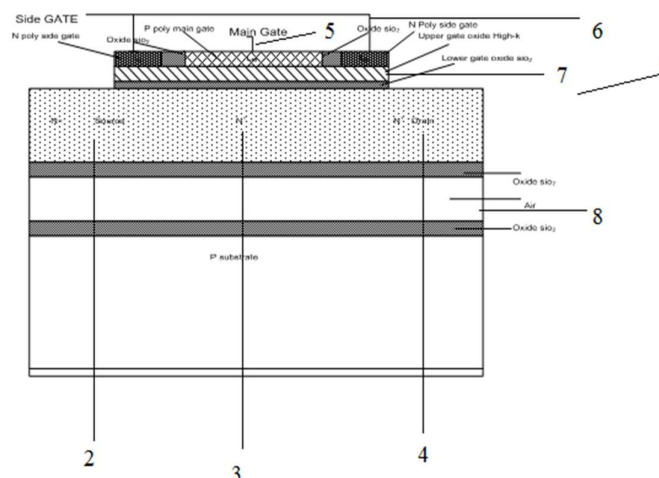
Design and implementation of Nanoscale Dual Gate Stack Silicon on Nothing Junctionless Transistor for improving short channel effect and analog performance

S.C.Wagaj¹, S.C.Patil²

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ABSTRACT-A junctionless transistor includes semiconductor layer on silicon on nothing (8) and dielectric material (7), and two layer gate dielectric is formed on the semiconductor layer; one layer is high-k dielectric (7) and another layer is low-k dielectric. A gate conductor is split in three different regions, first and third having same polarity (6). The gate conductor is formed on the gate dielectric and an active area is located in the semiconductor layer under the gate dielectric. The source (2) and drain (4) regions and active area (3) have the same conductivity type.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – 201721026855



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CIPCIS 2020: P- 225

Self-Charging Mechanism for Electric Bike

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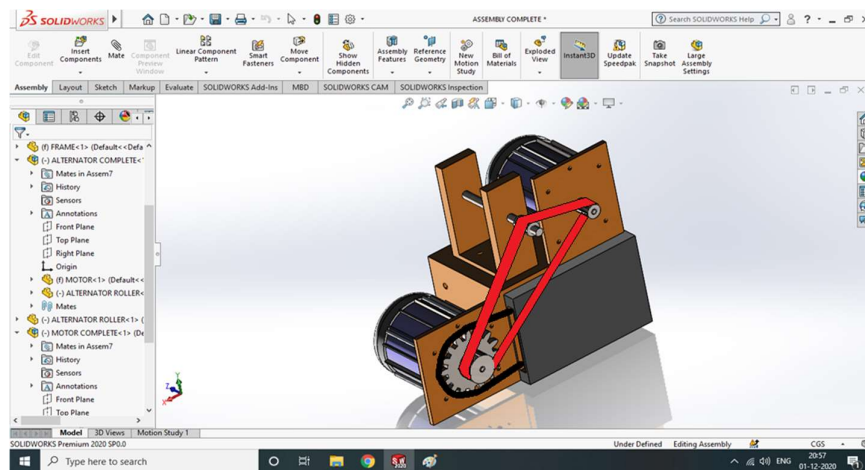
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ABSTRACT-Battery powered electric vehicles are gaining popularity worldwide. This trend is driven by several factors including the need to reduce air and noise pollution, and dependence on fossil fuels. The main drawback of today's electric vehicle is its limited range, and the long duration that is required to charge the electric batteries of the vehicles. In recent years, significant progress (through many R&D) has been made to decrease the charging time of the electric vehicle batteries through pulse charging rather than supplying continuous current and/or voltage. The part to be focused is that the estimation of electrical parameters of the battery in the electrical vehicle, which is the most important factor to get information about available driving range. If the amount of remaining battery capacity can be displayed for the driver then it is possible to make decision on the time of recharging the battery. To study battery behavior under different conditions, it is necessary to know various battery performance parameters. Future trends in electric vehicle charging are mostly fast charging, contactless charging, and charging from renewable or sustainable energy sources. Furthermore, charging vehicles to grid or charging vehicles to home are the present field of scope for research. When the battery gets fast charging and are overcharged, it will lead to overheating, performance weakening and damage to battery. Likewise, deep discharge is root to permanent damage. The BMS lends a hand to battery life improvement, lessen damage rate, and make the most capacity, efficacy, durability and reliability in battery stacks. This study presents a comprehensive review and evaluation of an onboard charging system that will keep charging the battery as efficiently as possible while minimizing the losses.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



CIPCIS 2020: P- 226

Recovery based Data Sharing by Collaborative Filtering

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Sneha Buchade^{2nd} Computer Department ACEM Pune
Pooja Tipale^{3rd}, Computer Department ACEM Pune
Rhutuja Bodkhe^{4th}, Computer Department ACEM Pune
Prof. Chetana Baviskar^{5th}. Computer Department ACEM Pune

ABSTRACT- Cloud computing is more and more well-liked nowadays. Cloud services like data-outsourcing services offer a growing sort of users access to cloud storage for large quantities of data, and enterprise square measure turning to cloud storage for cost-efficient remote backup. In 2011, DEPSKY (Dependable and Secure Storage in Cloud of Clouds) overcomes the restrictions that under the effectiveness of cloud storage: loss of convenience, loss, and corruption of data, loss of privacy, and marketer lock-in. sadly, DEPSKY lacks an error detection mechanism and comes with significant computing prices. Therefore, in this paper propose a replacement data-outsourcing theme overcoming not solely the four limitations, however conjointly the shortcomings of DEPSKY. In this paper a bent to use time server for memory management on cloud, once point in time crossed for the file that files mechanically destroy from the cloud. during this manuscript, in this paper a bent to switch Nyberg's accumulator and apply it to 3 projected error-detection strategies. Moreover, in this paper a bent to specially style a fast recovery methodology that's quicker than DEPSKY and various strategies.

DIAGRAM / SCHEMATIC –

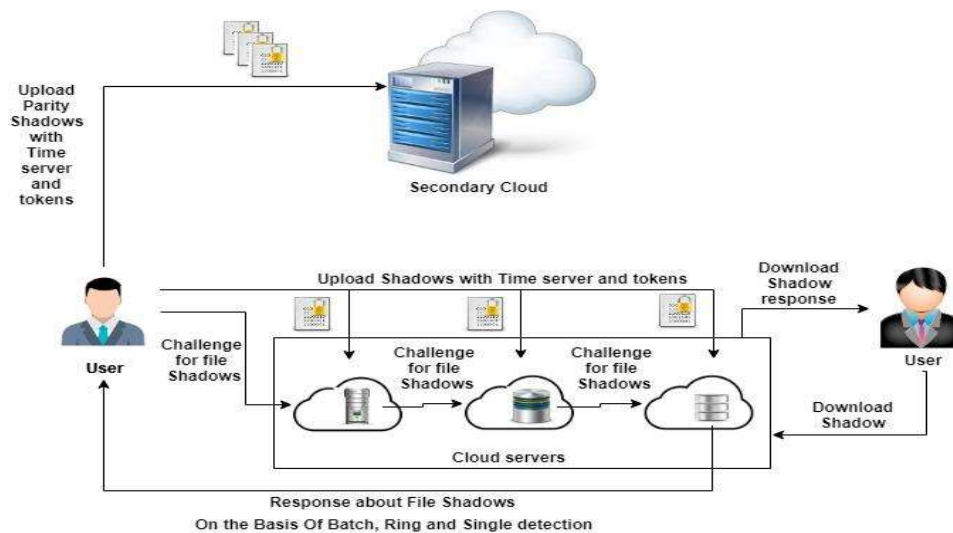


Fig: Architecture of Proposed System



CIPCIS 2020: P- 227

Image based search engine using deep learning.

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ABSTRACT- During previous number of years, the planet Wide Web (WWW) has become a particularly well-liked data source. To successfully utilize the large quantity of information that cyber web provides, we wish a good thanks to explore it. Image knowledge is much further voluminous than matter knowledge, and visual data can't be indexed by ancient methods developed for compartment allocation matter data. Therefore, Content-Based Image Retrieval ;CBIR; has received a beautiful deal of interest among the analysis community. A CBIR system operates on the visible choices at low-level of a user's input image that creates it troublesome for the users to plot the input and additionally does not supply adequate retrieval results. In CBIR system, the study of the useful illustration of choices and appropriate similarity metrics is extremely necessary for rising the performance of retrieval task. linguistics gap has been the most issue that happens between image pixels at low level and linguistics at high-level understood by humans. Among varied ways, machine learning (ML) has been explored as a feasible thanks to cut back the linguistics gap. galvanized by the present success of deep learning ways for pc vision applications, throughout this paper, we tend to aim to confront an advance deep learning methodology, referred to as Convolution Neural Network (CNN), for learning feature representations and similarity measures. during this paper, we tend to explored the applications of CNNs towards determination classification and retrieval problems. For retrieval of comparable pictures, we tend to in agreement on victimization transfer learning to use the Google Net deep design to our downside. Extracting the last-but-one absolutely connected layer from the retraining of Google Net CNN model served because the feature vectors for each image, computing Euclidean distances between these feature vectors which of our question image to come the highest matches inside the dataset.

DIAGRAM / SCHEMATIC –

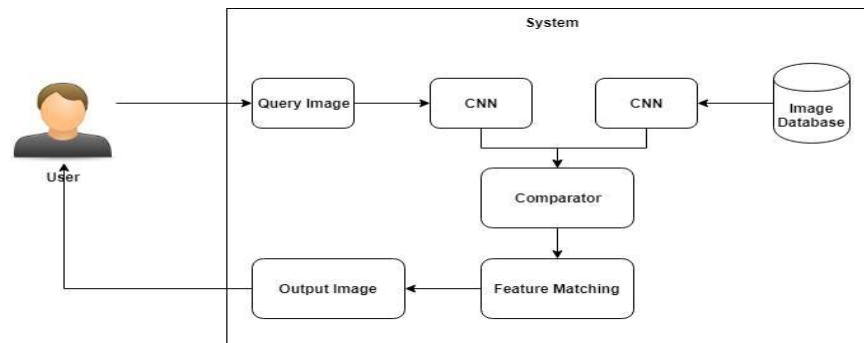


Fig.: System architecture of image based search engine using Convolutional neural network

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CIPCIS 2020: P- 228

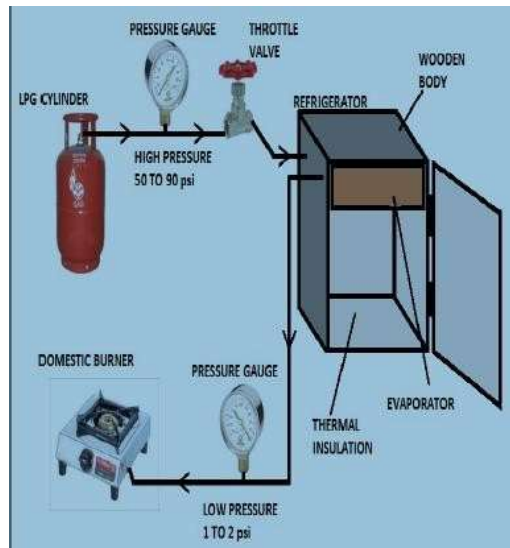
LPG Refrigeration system with zero operating cost

Akshay N Gavtalkar , Alok Kamad , Nikhil M Chopade , Sachin S Gajar , Prof. Sima Raut

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ABSTRACT- Supply of continuous electricity is still not available in several areas of the country and the world. At such places, this work will be helpful for refrigeration of food, medicines, etc...This paper investigates the result of an experimental study carried out to determine the Performance of domestic refrigerator when a liquefied petroleum gas (LPG) which is locally available which comprises of 24.4% propane, 56.4% butane and 17.2% isobutene which is varied from company to company is used as a Refrigerant. The LPG is cheaper and possesses an environmental friendly nature with no Ozone Depletion Potential (ODP) and no Global Warming Potential (GDP). It is used in world for cooking purposes. The refrigerator used in the present study is designed to work on LPG. The performance parameters investigated is the refrigeration effect in certain time. The refrigerator worked efficiently when LPG was used as a refrigerant instead of R134a. Also from the experiment which done in atmospheric condition, we can predict the optimum value of cooling effect with the suitable operating condition of regulating valve and capillary tube of the system. The use of LPG for refrigeration purpose can be environment friendly since it has no ozone depletion potential (ODP). Usually LPG is used as a fuel for cooking food in houses, restaurants, hotels, etc. and the combustion products of LPG are CO₂ and H₂O.

DIAGRAM / SCHEMATIC –



Schematic diagram of LPG Refrigeration system

IPR Acknowledgement / Grant Certificate –



CIPCIS 2020: P-229

Scraping Apparatus

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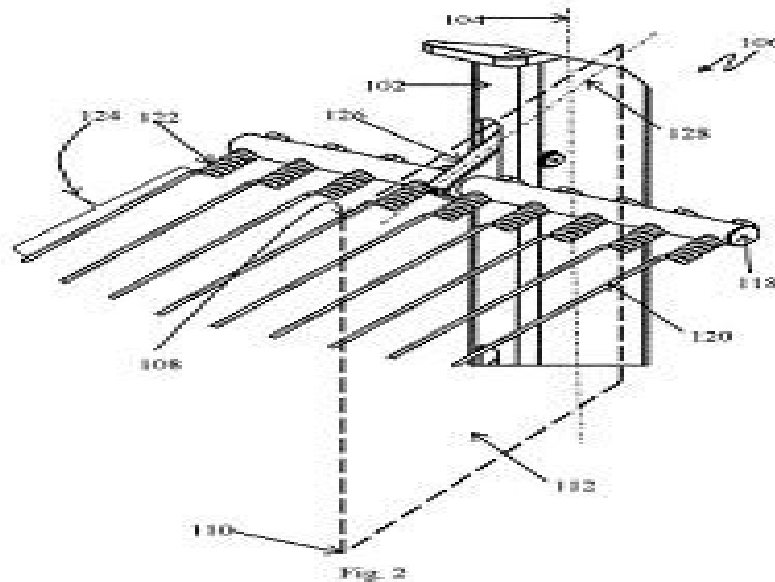
Salunkhe Sonalkumar Sureshroa

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ABSTRACT-

The present disclosure envisages a scraping apparatus that comprises a support structure, and a plurality of brushes pivotably mounted on the support structure such that the plurality of brushes is configured to perform an oscillatory motion along a longitudinal axis of the support structure. The apparatus further comprises an actuator operatively coupled with the plurality of brushes to facilitate the oscillatory motion of the plurality of brushes, wherein the oscillatory motion of the plurality of brushes facilitates the cleaning of a component

DIAGRAM / SCHEMATIC -



IPR APPLICATION / PATENT NO. – 3599/MUM/2015



CIPCIS 2020: P-230

Trimming Mechanism

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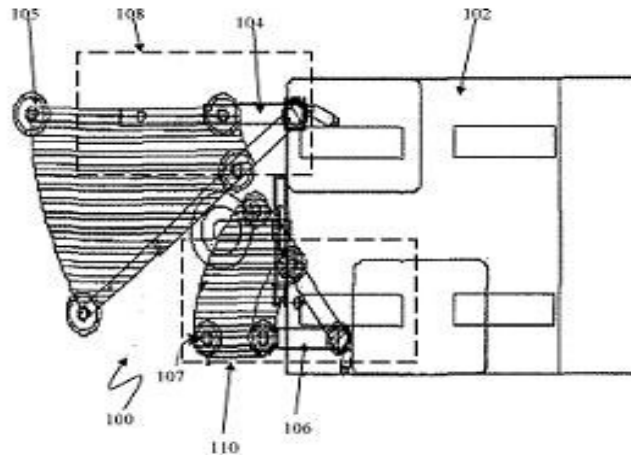
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ABSTRACT-

The present disclosure envisages a vehicle mounted trimming mechanism. The trimming mechanism comprises at least one cutter arm mounted on the vehicle, wherein the cutter arm is configured to pivotally move in a plane, and wherein the cutter arm has a telescopic configuration. The trimming mechanism further comprises at least one cutting element mounted on a free end of the cutter arm. Fig.1

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. – 4056/MUM/2015



CIPCIS 2020: P-231

Improved Sugarcane Harvester And Method Of Using The Same

Salunkhe Sureshroa Anandrao

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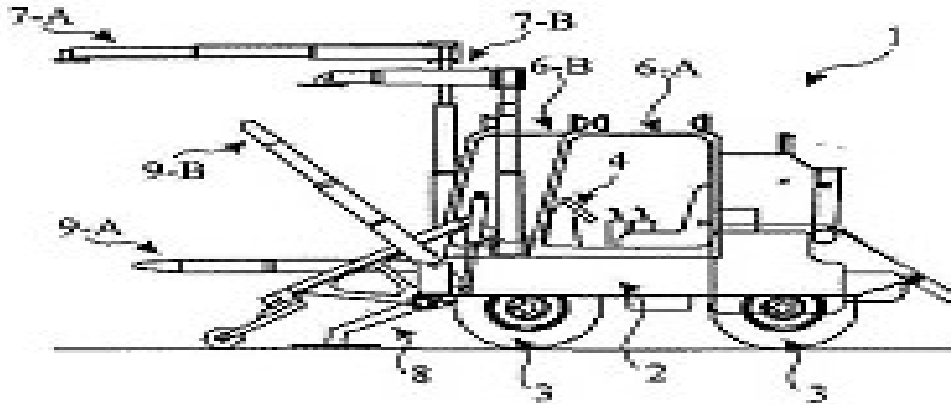
Salunkhe Sonalkumar Sureshroa

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ABSTRACT-

This invention relates to a machine for harvesting crop of vertically-elongated, stalk-type such as sugarcane. As the present large size harvester machines are designed to be efficiently used in large size sugarcane fields and are useful for base-cutting of sugarcane stalks of plantations only of one particular row width, they are not useful for countries where different framers use different row-width in there sugarcane fields and farm - sizes are small. Similarly, where same operator carries out top -chopping and base-cutting work, farmers face serial difficulties due to lack of proper chopping and cutting work. Also, in countries where collecting , bundling and cane-bundle-binding works are done before sugarcane stalks are transported to sugar mills, farmer face serious difficulties due to lack of sufficient available labor and hence mechanizations if these operations is very essential. The present inventions provides new inventive mechanisms to carry out all these operations in sugarcane fields of different row widths and hence is a boon to sugarcane-farmers of developing countries.

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. – 1123/MUM/2011



CIPCIS 2020: P-232

System And Method For Detection Of Adulterated Milk

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ABSTRACT-

A system and method for detecting adulteration in milk is envisaged. The system includes an AC source, a sensor, a signal processing module and a processor. The AC source provides an AC signal having a predetermined voltage. The sensor receives the AC signal, and is configured to be immersed in a milk sample for detecting milk adulteration. The signal processing module includes an AC amplifier that receives AC signal across the immersed sensor and amplifies the received AC signal to obtain an amplified AC signal, a peak detector that receives the amplified AC signal and obtains a corresponding DC signal, and a buffer amplifier receives and amplifies the DC signal to obtain an amplified DC signal having a DC voltage. The processor receives this amplified DC signal, the DC voltage of which is compared with a predefined DC voltage by a comparator to detect adulteration in the milk sample.

DIAGRAM/SCHEMATIC –

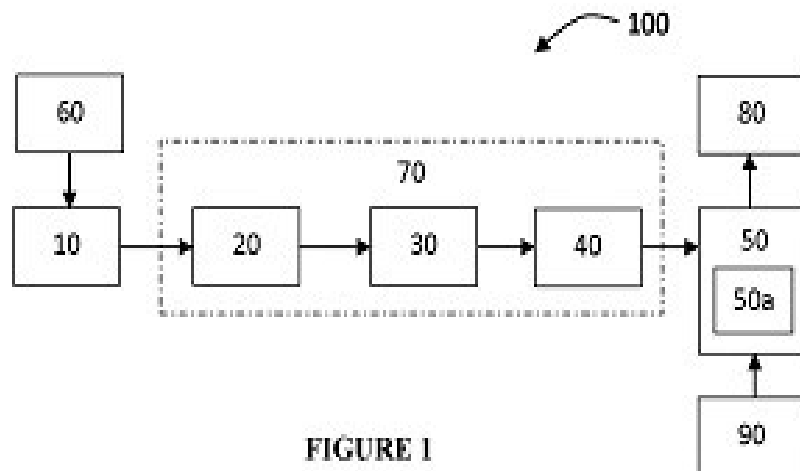


FIGURE 1

IPR APPLICATION / PATENT NO. – 1455/MUM/2015



CIPCIS 2020: P-233

Material Handling System

Salunkhe Sureshroao Anandrao

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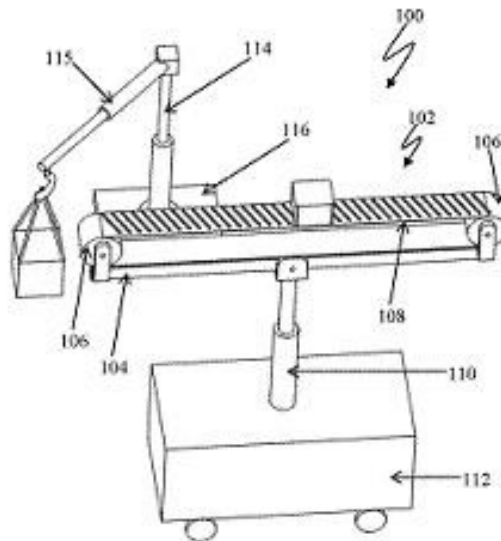
Deshpande Prashant Pralhad

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ABSTRACT-

The present disclosure envisages a material handling system comprising a conveyor system for conveying items from a first location to a second location. The material handling system further comprises a crane operatively coupled with the conveyor system. The crane is displaceable along the length of the conveyor system, wherein the crane is configured to lift and place items on and from the conveyor system

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. – 4056/MUM/2015



CIPCIS 2020: P-234

System And Method For Fermentation Of Batter

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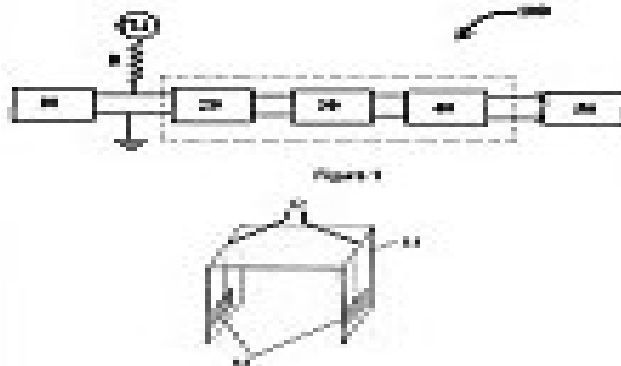
Rajarambapu Institute Of Technology

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ABSTRACT-

The present invention provides a system and method for fermentation of batter. Conventionally fermentation of batter for food products such as Dhokala, Idli, Dosa, Jalebi is done by manual means wherein it is not possible to control the fermentation process to desired value of tartness depending on climatic variations. The present invention provides a system and method to ferment batter required for food items in less time without affecting any nutritional values and by automatically monitoring and controlling the tartness level of the batter being fermented.

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621033852



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CIPCIS 2020: P-235

Novel Indole Compounds

A. B. Thomas, G.S. More

ABSTRACT- The present invention related to novel indole compounds and the salts thereof used for the treatment of cancer. The invention also relates to processes for preparing these compounds and their intermediates.

IPR APPLICATION / PATENT NO. – TEMP/E-1/21312/2018

CIPCIS 2020: P-236

Method For Preparing Highly Stable Anthocyanin

**Santosh Bhujbal, Sohan Chitlange,
Reshma V. Jadhav, Vijay Jadhav and Ashish Jain**

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Maharashtra, India. 020-27805292 / 020-27805293 / 020-27420261 / 020-27421549 Info.Pharmacy@Dypvp.Edu.In

ABSTRACT- The present invention relates to a method for preparing highly stable anthocyanin where in stabilization of anthocyanin is carried out by co-pigmentation method using ferulic acid and the use of stable anthocyanin as food additive and colorants in various fields. The invention also relates to a method to enhance the thermal and color stability of anthocyanin pigment at higher temperature

IPR APPLICATION / PATENT NO. – 201821041712

CIPCIS 2020: P-237

A Novel Two Components Herbal Microparticulate Formulation For Diabetes Management

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ABSTRACT- The present invention relates to a novel two components herbal microparticulate formulation for the management of Diabetes Mellitus, particularly the present invention related to a novel antidiabetic herbal formulation prepared using microparticulate drug delivery system with improved solubility and bioavailability

IPR APPLICATION / PATENT NO. – 201921045670

CIPCIS2020, February 18-20, 2021



Pimpri Chinchwad Education Trust's
PIMPRI CHINCHWAD COLLEGE OF ENGINEERING AND RESEARCH,
Laxminagar, Ravet, Pune-412101 (Maharashtra)
**CONFERENCE ON IPR, PATENTS, COPYRIGHTS,
INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P-238

Vapour Shield Insect Repellent Composition And System Thereof

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Maharashtra, India. 020-27805292 / 020-27805293/ 020-27420261 / 020-27421549 info.Pharmacy@Dypvp.Edu.In

ABSTRACT-

The present invention relates to a vapour shield insect repellent composition and system thereof, more particularly a sublimating vapour shield insect repellent composition comprising volatile non-toxic repellent substances along with other sublimable base material having a high degree of efficacy in repelling mosquitoes and other insects.

IPR APPLICATION / PATENT NO. – TEMP/E-2/2143/2019/MUM

CIPCIS 2020: P-239

Medicated Skin Regenerative Dusting Powder Hydrogel For Wound Healing

R. V. Badhe, S.S. Chitlange

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ABSTRACT-

The formulation is a dusting powder. This dusting powder is made-up of cross-linked chitosan and gelatin. It contains azithromycin and lidocain medicament. This dusting powder particle size is kept below 5 microns. These particles stimulate clotting mechanism and get entangled in fibrin during clotting and form an instant layer over wound. When applied on the wound, this formulation absorbs the wound exudes and form hydrogel. Hydrogel slowly releases antibiotic which kills bacterial infections and lidocain stops pain. Hydrogel, in addition to medicament release, inhibit growth of fibroblast cells and avoid scar tissue formation. The gelatin part get dissolved in body fluids due to action of lysozyme and generate 3D porous scaffolds where skin cells migrate and grow, thus healing the wound faster. Chitosan being mucoadhesive remain adhered to mucosal surface of wound, thus supporting one time application of the formulation.

IPR APPLICATION / PATENT NO. – TEMP/E-1/21751/2018-MUM

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-240

Advance Rain Water Utilization Using Digital Control System

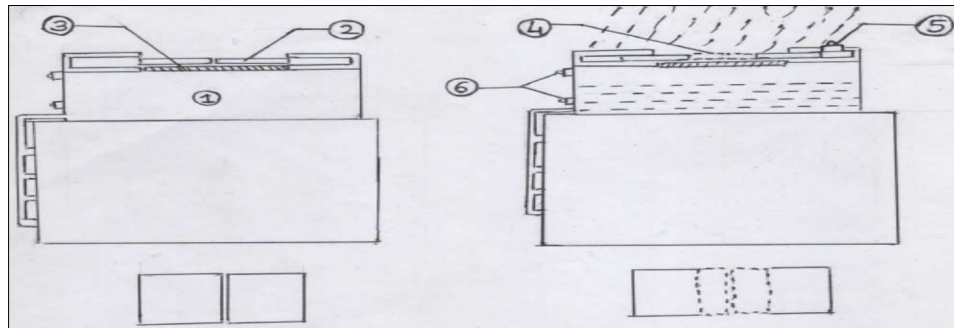
Aditya Sudhir Yadav

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

A system which makes it easy to utilize and store rain water in the tanks of the building, a said system uses combination of automatic opening and closing lid , filters , sensors : water level sensor ,filter quality sensor, rain water sensor , and a digital display with LED indicators. The said system consist of automatic opening and closing of lid is controlled by rain water sensor the lid is open till maximum water level is achieve further lid will closed avoid overfilling. The said filter is to be installed in between lid and tank, filter plays vital role to purify water and avoid unwanted foreign particles. The said digital display installed in filter will glow GREEN LED when filter is safe and will glow RED LED when filter has to change.

DIAGRAM / SCHEMATIC –



1 :Water Storage tank on building, 2 : Lid (closed, 3 : Layer of filters, 4 : Lid (open),
5 : Rain water sensor, 6 : Water level sensors

IPR APPLICATION / PATENT NO. – 201621027009



CIPCIS 2020: P-241

The System Which Separates Steam And Water From Moist Steam

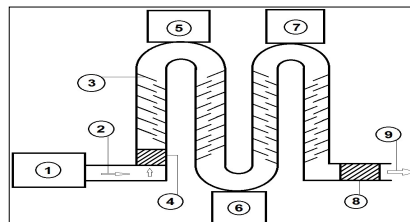
Indrajeet Rajendra Khandait

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

For stamping, A system not only separates the water and steam from the moist steam but also converts collected moisture again into the steam, said system uses metallic pipe, heat suppliers and insulating materials, insulating materials are attached at the starting and ending point of the metallic pipe so that there will be no heat transfer in between pipe and the other components of the system, circular metallic pipe consists if zig-zag arrangement in the middle so that when the moist steam gets pass through it, moisture gets stuck on the surface of the pipe and due to lower density of the steam, steam gets passed through the pipe, heat suppliers are attached to the metallic pipe so that to maintain the temprature of the pipe in between 140-150 degree celcius because when the moisture gets stuck on to the suface of the pipe, due to higher temprature of the metal pipe, moisture gets again converted into to the steam, Installing this system will make nominal increment in the cost of the whole structure.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621027008

CIPCIS 2020: P-242

Laser Assembly Used For Surveyor's Tripod Centering

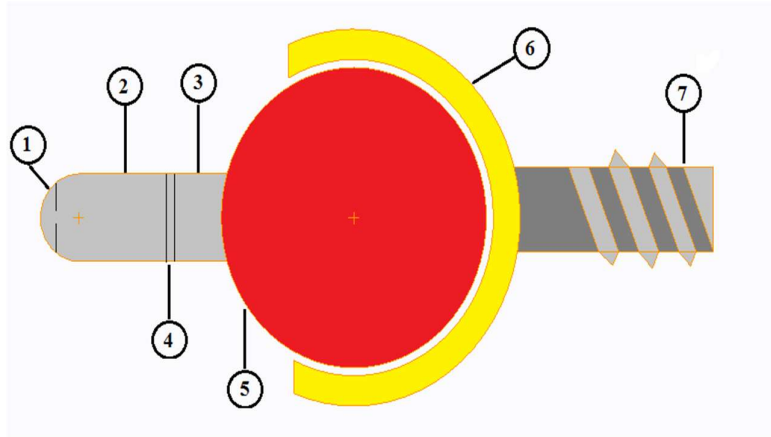
Onkar Anandkumar Indlkar and Akshay Kirit Kacha

Department of Civil Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

An apparatus is set forth for providing vertical alignment and indication of a fixture positioning with relative to a ground reference point, wherein the apparatus includes a laser emitting diode mounted with axial ball and socket and the socket is fixed with tripod stand. The laser member is fixed with ball to focus a laser beam on the ground surface. an laser emitting diode situated in cylindrically shaped compartment being battery operated. The socket is threadably connected to the bridge screw (tripod head) and has an aperture through which the laser beam is emitted wherein the beam is aligned a reference position on the ground, with a fixture target point on the ground. Vertical alignment is provided by the use of laser beam directed from the laser diode through the objective and focusing lens respectively regardless of the relative planer relationship of the ground surface. An on/off switch is provided along with a rechargeable battery.

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621027266



CIPCIS 2020: P-243

The Rotatory Jaw Chuck

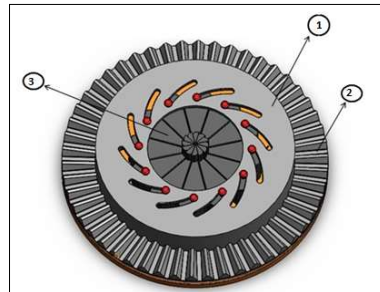
Jay Nagnath Itkal

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

The system is for preventing misalignment of work piece due to irregular movement of jaw. The chuck is suitable for holding round, square or hexagonal & other similar shaped work piece & the job is centre automatically & quickly. The accuracy is obtained by changing the no of jaw of chuck to align the work piece. To increase the no of jaws successfully without using more space we used a system like lens aperture.

DIAGRAM/SCHEMATIC –



1 : Rotating Plate, 2 : Gears, 3 : Jaws

IPR APPLICATION / PATENT NO. –



CIPCIS 2020: P-245

Electric Meter With Smartcard

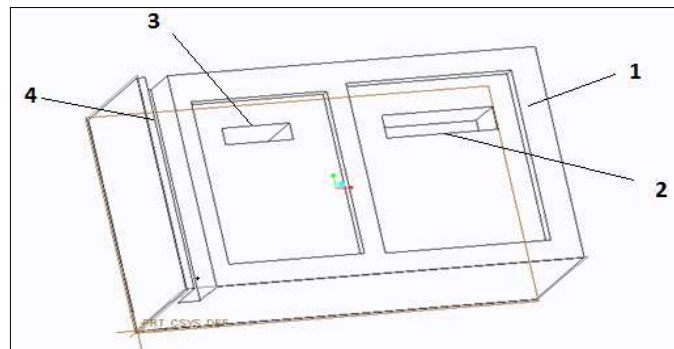
Chetan Ramesh Ingale

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

Swap machine attach to the electric meter, when internet connected swap the smartcard to the swap machine, current billing unit is recorded and then gives the message to register mobile number of billing unit and amount, for paid the amount machine is installed in the billing office which connect to the computer , when insert the card in to the machine , information display on computer screen ,when paid the amount machine operator change current reading to last reading. Next time when swap the card on your electric meter according to reading show on your register mobile number.

DIAGRAM/SCHEMATIC –



1 : electric meter, 2 : billing unit, 3 : led display , 4 : swap the smartcard

IPR APPLICATION / PATENT NO.– 201621030633



CIPCIS 2020: P-246

Automated Tyre Puncture Protection And Tyre Cleaning System When Vehical Is Running Simultaneously

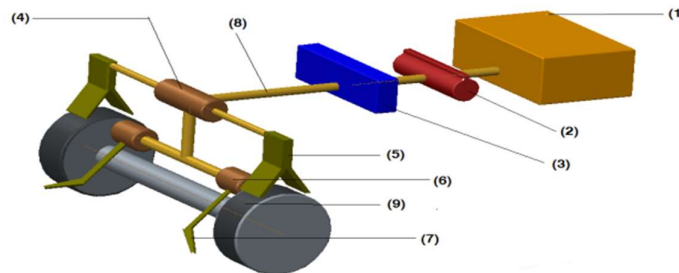
Ashish Chandrashekhar Shinde

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

Swap machine A system for automatic Tyre puncture protection and Tyre cleaning system when vehicle is running simultaneously by using pressurized fluids or pressurized cooled exhaust gases, the said system consists of fluid tank where fluids or exhaust gases are stored, further they are supplied to compressor where they are compressed which increases their pressure and if exhaust gases are used they are supplied to cooler to lower their temperature to a suitable value, then they are supplied to the pump 1 and then from the pump 1 they are supplied to nozzle 1 which is fitted above the tyres and in case of Tyre cleaning system the pump 1 is operated by the driver, which pumps compressed as well as pressurized fluids or cooled exhaust gases tangentially on the Tyres such that the mud and the dirt stuck on the surface and in between grips of the Tyres is washed off due to force exerted by the pressurized fluids or pressurized cooled exhaust gases, thus cleaning the Tyres which provides better grip and smooth and easy driving of the vehicles and also reduces the temperature of the tyres, wheels and brakes and in case of Automated Tyre puncture protection system the metal detector fitted below the bumper in the front of the Tyres as shown in figure 2 will detect the metal elements before the Tyres ride over it and will send the electric signal to the pump 2 and hence the pump 2 will get ON and will eject compressed as well as pressurized fluids or cooled exhaust gases on the metal elements and will blow off to the side before Tyres rides over it, thus preventing the Tyres from puncture and if the driver is driving on the unmetalled or dirt roads he will ON the pumps 2 manually and will keep it ON continuously and hence the pumps 2 will blow off the stones, thorns or any other elements present on the road before Tyres roll over it, thus ensuring that Tyres rolls over smooth surface, hence preventing the Tyres from damage and increasing its durability.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO.– 201621030635



CIPCIS 2020: P-247

Automatic Opening Of Laptop Lid Using Toggle Switch

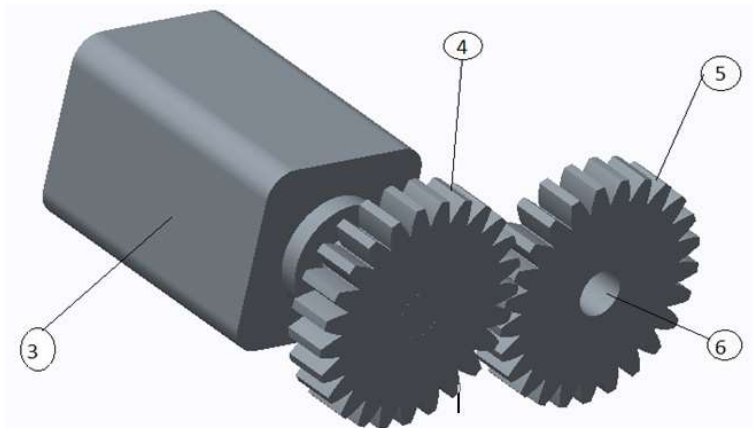
Shreekant Rakesh Shukla

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

The system used to open and close the lid of the laptop by using this system which consist of a programmed DC stepper motor, spur gear, momentary toggle switch, by using this system the laptop lid can be opened and closed by manually as well as automatically, the switch is momentary toggle switch which means it will be operated manually in either direction meaning that when you pull the switch from the off position to one of the two on positions it will only stay there as long as you hold it and then spring back to OFF position the stepper motor will get the supply from the battery which is provided within the laptop, the motor rotates in both direction

DIAGRAM/SCHEMATIC –



3 : Stepper motor which rotates in both the directions, 4 : Spur gear attached to the motor, 5 : spur gear attached to the hinge of the lid, 6 : position of hinge of laptop lid

IPR APPLICATION / PATENT NO.– 201621031258



CIPCIS 2020: P-248

Electrically Adjustable Mirrors In A Two Wheeler Vehicle Using A Switch

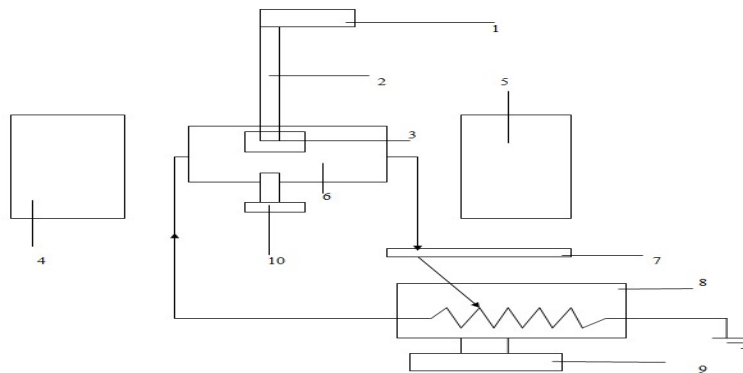
Ronak ParesH Hariya, Suhrida Goutam Chakraborty

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

A system with mirror adjustment in two wheeler vehicle by a switch , said system is consist of actuator , resistance switch , linear mover and magnets, actuator is current carrying conductor which is kept in between two magnets. Magnets provides magnetic field, linear mover slot button is provided on the vehicle as a switch. One end of Linear mover slot button is in contact with resistance switch, and other end is connected to actuator by current carrying wire, as button slides , it changes value of resistance in contact, ultimately changes the value of current and electric power supply is provided from the battery of the vehicle to the resistance switch, as one terminal of the resistance switch is grounded , other terminal is directly connected to the actuator, actuator experiences some force in presence of magnetic field and electric current, as actuator is pivoted at the centre, it will deflect by some angle , mirror is connected to actuator by mirror stand, so by supplying different values of current, mirror can move by some angle.

DIAGRAM / SCHEMATIC –



1 : mirror, 2 : mirror stand, 3 : connection slot, 4 : north pole of the magnet, 5 : south pole of the magnet,
6 : actuator, 7 : linear mover, 8 : resistance switch, 9 : power supply, 10 : pivoted link.

IPR APPLICATION / PATENT NO.– 201621031258



CIPCIS 2020: P- 249

Seat belt assisted Automatic hand break

Muskan Nadaf , Bharat Karale, Sonali Pawar, Anurag Chandgude, Prof. Sima Raut

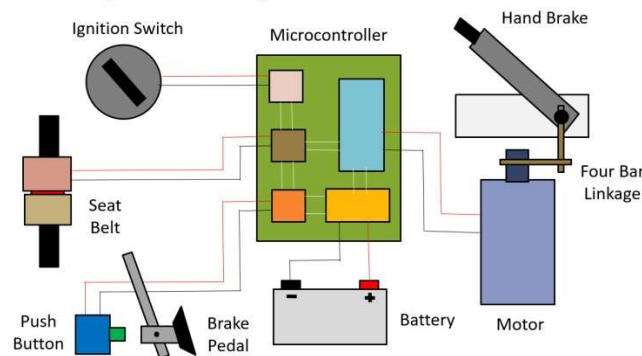
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4 Alard College of Engineering and Management, Pune, India, anuragchandgude9641@gmail.com, 9881868352

ABSTRACT- One of the most important safety features in an automobile is brake. A typical automobile consists of two types of brakes, one for retarding the speed of vehicle while it is in motion and other is to hold the vehicle in its place when standing still or parked. The latter is mostly important when the vehicle is parked on slope. It is important to engage and disengage the hand brake before starting the vehicle from rest position and for vehicle to move forward respectively. And without pulling or pushing the lever the parking brake will not engage or dis- engage. Due to operator errors the brake is not getting engage, this led to the brakes to become in effective and eventually they failed to serve their purpose. And also, for the safety purpose the seat belt is necessary to wear but many drivers are avoiding wearing the seat belt which leads to major accidental death or damage just for neglect to wear a seat belt. To overcome all the limitation of the conventional system and not wearing seat belt after the government norm we proposed the new automatic handbrake system. For safety of the vehicle and the human itself by the help of both seat belt and hand brake. This system uses electronic circuit, electric motor for engaging and dis-engaging the hand brake. Engaging of hand brake takes place when ignition is off, and the seat belt is removed and dis- engaging of hand brake takes place when the ignition is ON and seat belt is fastened and also foot brake pedal is pressed.

DIAGRAM / SCHEMATIC –

Conceptual Design



IPR Acknowledgement / Grant Certificate –Patent/ copyright



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Laxminagar, Ravet, Pune-412101 (Maharashtra)
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INNOVATIONS & STARTUPS (CIPCIS 2020)**



CIPCIS 2020: P- 250

Power Generation Using Foot Step

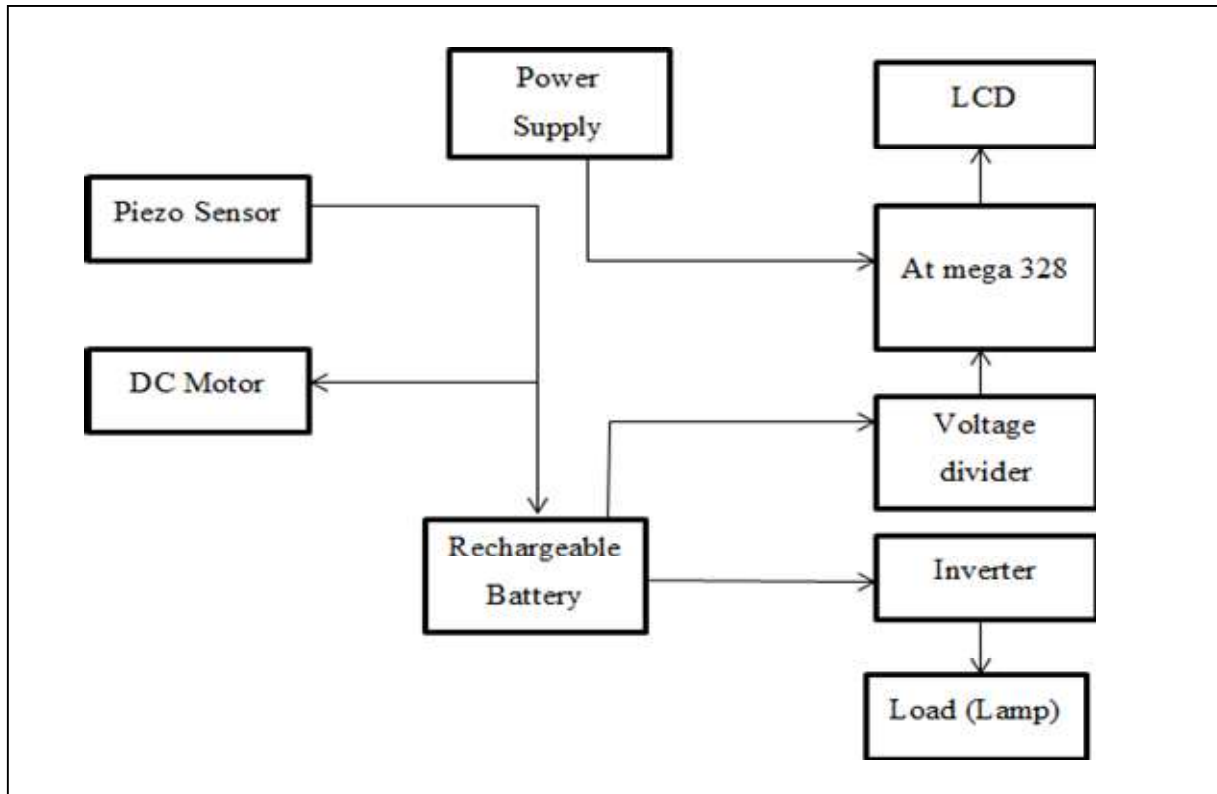
Nitish Kulkarni, Aditya Thakur, Sandeep Antreddy, Hrishikesh Ghare, Krishna Panchal

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ABSTRACT- The decline in the energy usage of portable electronic devices, the idea of renewable energy harvesting in the human environment, has given rise to renewed interest. This technical paper focuses on one of these advanced methods of energy harvesting using piezoelectric material. Materials can be used as a tool for transferring mechanical energy, usually ambient vibration, to electrical energy that can be stored and used to power other equipment. A piezoelectric material is one that generates an electrical charge when a mechanical stress is applied. Conversely, a mechanical deformation occurs when an electrical field is applied. Piezo can produce enough electrical density to be stored in a rechargeable battery for later use. Piezoelectric materials are commonly used in real fields some of the most recent applications are listed below. At present, alternative sources of energy are required at passenger terminals, such as airports and railroads all over the world. Cleaner, more efficient forms of electrical power are required to keep costs down, maintain positive and constructive ties with neighbour and ensure a healthy environment for future generations. The use of piezoelectric devices installed in terminals would allow to get the kinetic energy from foot traffic. This energy can then be used to counteract some of the electricity that can be used to run lighting systems. Low-power electronic devices have grown rapidly in the last few years. In large numbers, the machines are used to comfort our everyday lives. With the rise in the energy usage of these portable electronic devices, there is a new interest among us in the idea of extracting alternative renewable energy in the human environment. I am trying to build a piezoelectric generator in this project. This can generate the energy of vibration and pressure available at any other time (like people walking). This project explains the use of piezoelectric materials to collect energy from people walking vibration to produce and store energy. This definition is also applicable to some of the broad sources of vibration that can be identified by nature. This project is also a step towards a piezoelectric energy harvesting model that is cost-effective and simple to implement.



DIAGRAM / SCHEMATIC –





CIPCIS 2020: P-251

Innovative And Efficient Smart Calculator With Unit-System

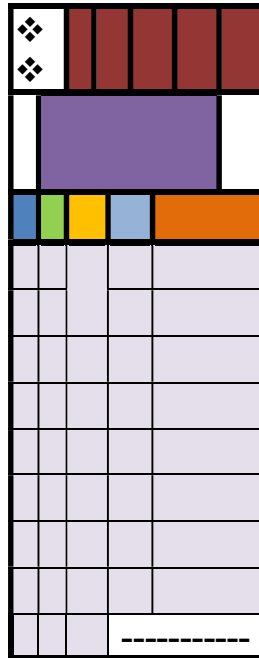
KUDOLI ANAND BASAVRAJ and SUDARSHAN SAMPATRAO BOBADE

Asst. Prof. Department of Mechanical Engg.,PCCOER, Ravet, (MS) India,anand.kudoli@pccoer.in
Asst. Prof. Department of Civil Engg.,PCCOER, Ravet, (MS) sudarshan.bobade@pccoer.in

ABSTRACT-

Smart Calculator in which input data in any unit-system (SI,MKS,CGS) entered is shown directly on display with numerical value along with its unit, is processed through inbuilt transformation system at the time of entry itself, and solve the problems of millions of users in finding final answer as per their choice in any of above said unit-system, that saves the time of user as a main resource, build confidence of solving the mathematical problems, required less time to convert final answer in various unit, as in every field calculations are required to be carried out with various unit-system, users will enjoy calculations with ease and accuracy.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621032482



CIPCIS 2020: P-252

Fin Based Preheating Of Catalytic Converter

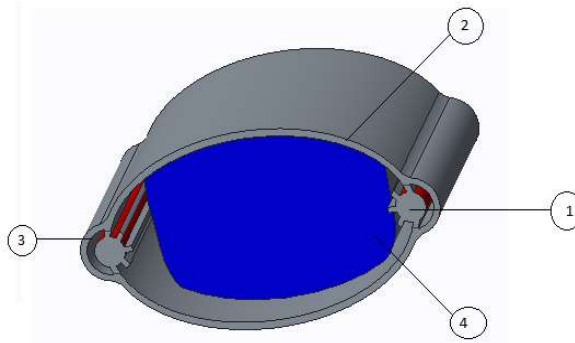
Tejas Kashinath Bodke & Omkar Virendra Deshpande

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

A system for preheating the core of platinum-palladium, platinum-rhodium of the catalytic converter so that the reaction of the core with the exhaust gases happens at a better and a faster rate, by means of a heating element of red-brass having fins at its periphery, positioned at the casing of the catalytic converter, so as the starter is turned a voltage is amplified through the wire harness and is given to the heating element thus the heating element (red brass) having high thermal conductivity (159 W/mK) transfers the heat by means of fins on the periphery into the casing of the converter: thereby heat energy is absorbed by the core of platinum-palladium and platinum-rhodium which enables the proper reaction of the platinum-rhodium, platinum-palladium core with the exhaust gases from the engine and hence increases the efficiency of the core to react with the exhaust gases.

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201721001280



CIPCIS 2020: P-253

An Alteration In Screwdriver To Make It Easy To Grip And Apply More Torque

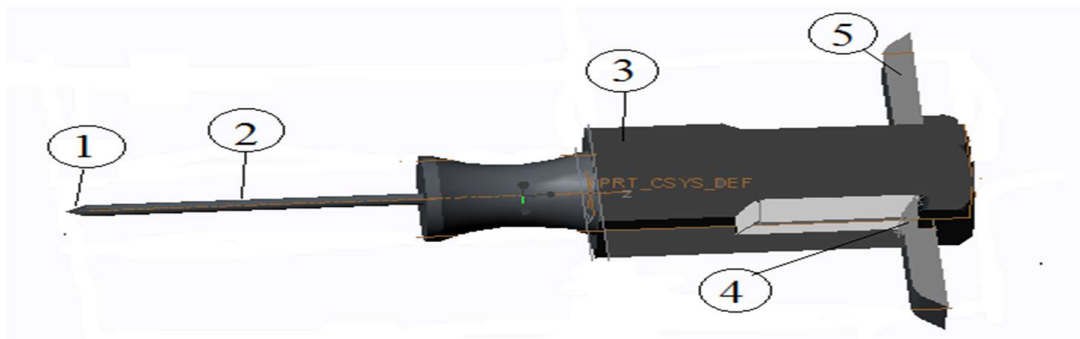
Suraj Balasaheb Satav

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

Tip of screwdriver (1) is kept on target screw, Wings (5) are pulled outside so that they will be perpendicular to the cylindrical shaft (2), for tightening purpose handle (3) is moved in clockwise direction and for removing Purpose it is moved in anticlockwise direction, action of wings is used whenever the grip is required and screws are tight.

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. –



CIPCIS 2020: P-254

Computer Mouse Containing Fingerprint Sensor For Detecting Password And User Id Of User

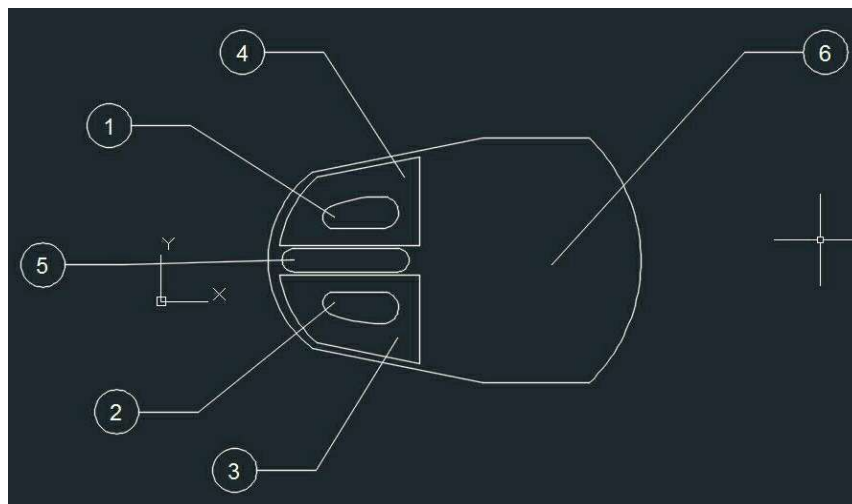
Vivek Padmakar Mahajan

Department of First Year Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

This innovation is based upon digital authentication by fingerprint sensor, a system use to sense user digital authentication, when system is initiated then it will ask to you digital password, later on you should put your first finger on mouse left portion, then scanner will scan your finger print and identify authorized user, after this put your second finger on right side portion of mouse then system will recognized your fingerprint as digital password, suppose unauthorized user try to access password so system will decline it, if an unauthorized user try to open desktop with digital fingerprint password or user ID the system will not open, if user is authorized then desktop will get open, after successful opening of desktop then right click and left click will work as normal right click and left click of computer.

DIAGRAM / SCHEMATIC –



1 : First Finger Print Scanning Area, 2 :Right Click, 3 : Second Finger Print Scanning Area,
4 : Left Click, 5 : Scroll Button, 6 : Mouse Case

IPR APPLICATION / PATENT NO. – 201721009976



CIPCIS 2020: P-255

Safety Indicator System For The Personal Protective Equipment (PPE)

Sushmita Sanjay Shinde

Flat No.203 A-wing Gulmohar Garden, Laxmi Park, Kalewadi, Pimpri,, (MS) India

ABSTRACT-

This system is used to indicate the complete wearing of the PPE (Personal Protective Equipment) by the worker during the working hours which forms an altogether connection when switched on between all the safety equipment's where each equipment is attached by a sensor and when all equipment's are connected in a loop connection it indicates a green light on the led mounted on the helmet and if the worker removes any one of the equipment which disturbs the connection made by the sensors and it sends a feedback to microcontroller which is continuously monitoring the loop and indicates a red light which shows that the worker is working in the working hours without following the safety measures and thus not following the safety rules which makes easier to detect the working measures followed by the workers and the risk owned by not following the rules in working hours

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201721011307



CIPCIS 2020: P-256

A Smart Switching System For Electrical Appliances To Prevent The Wastage Of Electricity

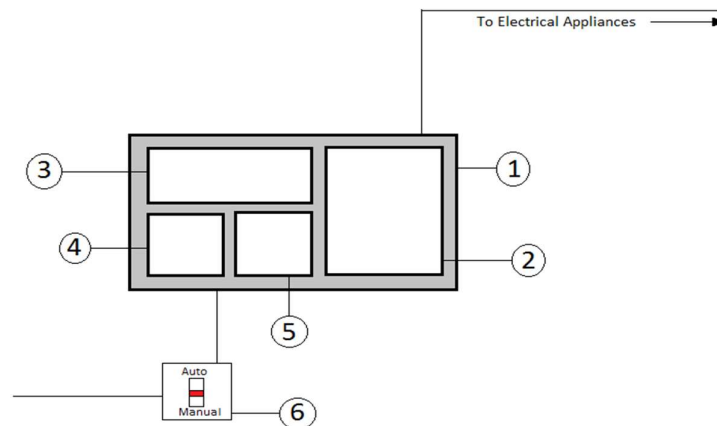
Shreyash Sanjay Pimpalshende

Department of Computer Engg. PCCOER, Ravet, (MS) India

ABSTRACT-

The Sensor Hub will be used as a control unit in the above mentioned work of automating the switching system, it can be used for switching ON/OFF a wide variety of electrical appliances based on the detection system used in the sensor hub and using any extra sensor required for detection work according to the need, for this purpose the default sensors of sensor hub are used and no extra sensors are required, the detection work of the sensor hub will start if the manual override switch is on automatic mode, then firstly, the proximity and the infrared heat sensor assembly will together detect the presence of any human body in the room by looking for the appropriate human body temperature and position of body, if sufficient natural light required is not present in the room, then the ambient light sensor will determine the amount of light required in the room and thereby switching ON the lights and adjusting their luminous intensity according to the need, if the manual override switch is turned to MANUAL mode, then the sensor hub will not work, hence automation could not be performed and the user will be able to operate the conventional switching system to turn the lights ON/OFF.

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201721011569



CIPCIS 2020: P-257

Kilometer Predictor Which Will Sense Fuel In Tank And Predict How Much Kilometer Vehicle Will Travel Further

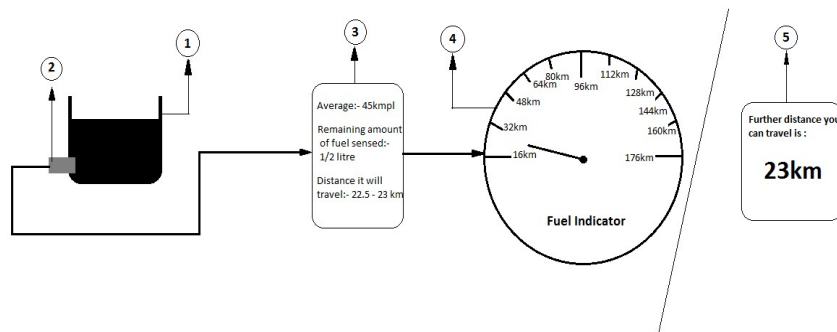
Rutvij Rajiv Patil, Anagha Sudhir Navale, Anagha Sudhir Navale

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

This innovation is based upon fuel indicators which the vehicles have. Vehicles generally show that is your tank empty or full. But it can't exactly show how much far will it go. According too our invention, sensor(2) in the tank(1) will sense the amount in the tank. Sensed amount will be in the form of litres. Sensor will command the automatic calculator (3). Automatic calculator will be programmed to calculate distance which vehicle can travel with respect to average of the vehicle. Calculated amount will be displayed on dashboard in analog indicator(4) or digital indicator(5). Digital indicator will show exact value as compared to analog indicator. We can call them distance predictor rather than fuel indicator. This will help rider to get accurate value of distance he can travel with remaining amount of fuel and he can refill his/her vehicle from nearby fuel station.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. –



CIPCIS 2020: P-258

Smart Universal Mobile Charger With Different Current Rating

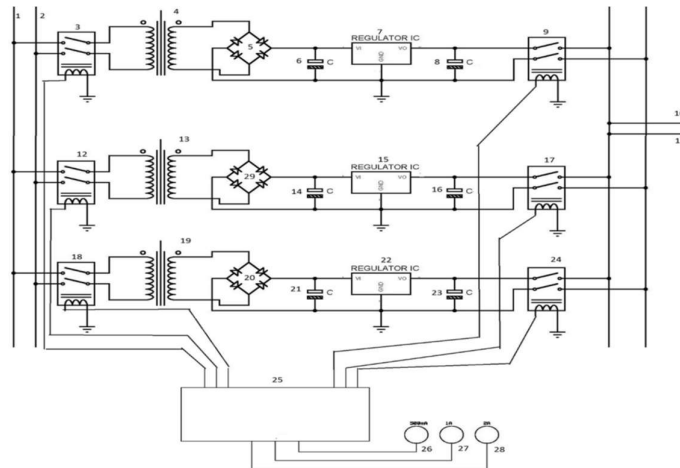
Shreyash Sanjay Pimpalshende

Department of ComputerEngg., PCCOER, Ravet, (MS) India

ABSTRACT -

This innovation is based upon the use of relays and a microcontroller system that provides single mobile charger to be used for the different current ratings. This charger can be used to generate N different values of current rating at the output of the mobile charger. It uses '2N' number of relays, '2N' capacitor filters, 01 or many Microcontroller (depending upon current rating values), N step down voltage transformers, 'N' bridge rectifiers, 'N' Voltage regulator ICs. Here, an example is given for N = 3 as show in schematic show in circuit diagram below. There are 03 push buttons given for selecting desired current ratings of 500mA, 1A and 2A. As user selects the desired current mode, microcontroller activates respective rectifier circuit and produces desired current rating at the output

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. –



CIPCIS 2020: P-259

Brakes Containing Integrated Circuit (IC), Switch For Switching On Indicator In Moped

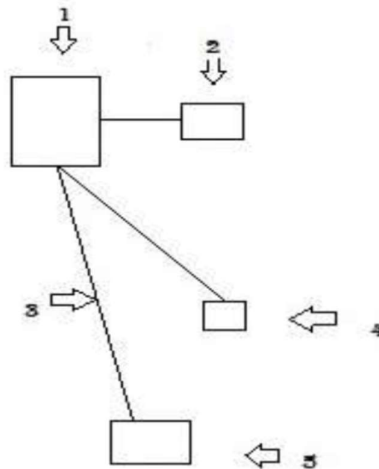
Deven Prashant Padale

Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT -

This innovation is based upon, an IC which is designed or programmed to switch on the indicators by pressing brakes two time and thus it will allow to flow the current, a switch is placed between the brakes an IC by which when the brake is pressed it presses the switch and then it presses the IC by which the current is allowed, this invention will make it more easy for the user to turn on indication system for mopeds.

DIAGRAM/SCHEMATIC –



IPR APPLICATION / PATENT NO. –



CIPCIS 2020: P-260

AUTOMATIC BHEL VENDING MACHINE

Dr. Anand kakade

At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India

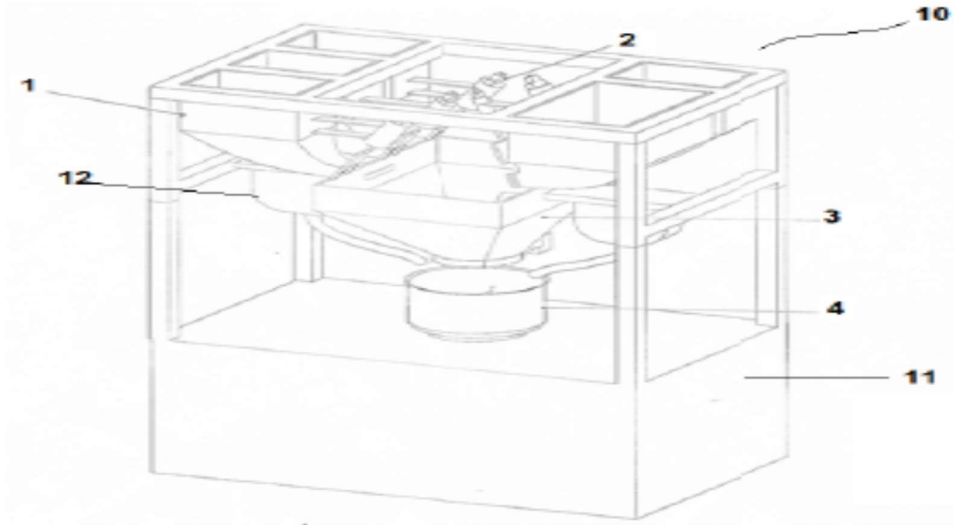
Rajarambapu Institute of Technology

Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India.

ABSTRACT-

The present invention provides an automatic Bhel making machine. The invention replaces the manual method, and provides a consistent, quicker and hygienic manner for preparation of Bhel as desired by a user's taste preference. The present invention also reduces the preparation time significantly.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621033974



CIPCIS 2020: P-261

HIGH TRACTION MANUAL TILLER

Dr. Anand kakade

At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India

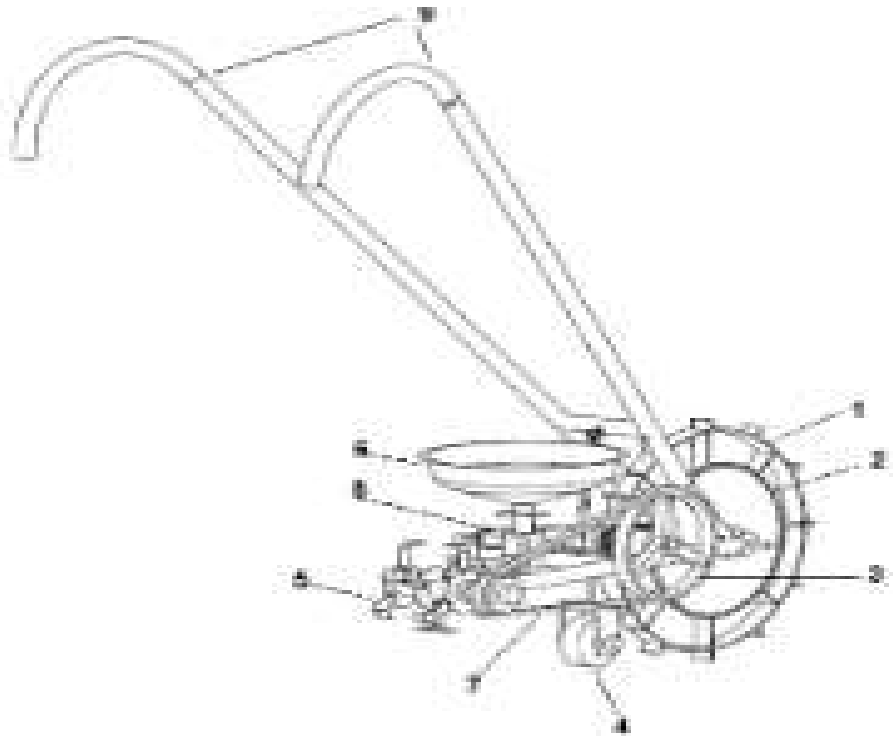
Rajarambapu Institute Of Technology

Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India.

ABSTRACT-

The present invention provides an agricultural device that can be operated manually by a single person and is capable of performing tilling, weeding, seeding and fertilizing operations by use of the same device, with minimum manual effort. The device is suitable for use by the Indian farmer where land holdings are small. The device is economically affordable and results in increase in agricultural productivity.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621042348



CIPCIS 2020: P-262

Continuously Variable Length Circular Intake Manifold System

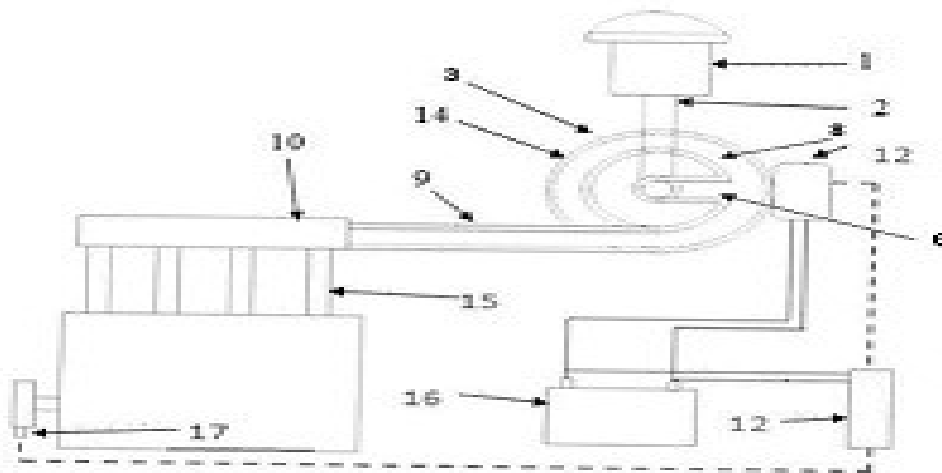
Mr.Thombare Dhananjay Ganpati¹, Mr.Badhan khushaldas vasant², Mr.injamuri jagdish shriniwas³

Jijai, Shripadnagar, Peth Road, Isampur, Tal. Walwa, Dist. Sangli, Maharashtra, India, PIN – 515409
Peth Lane, Near Gram-panchayat Office, A/P: Nampur, Tal: Satana, Dist: Nashik, Maharashtra, India, PIN - 423204
Home No. 1671, Kuchan Nagar, Solapur, Dist. Solapur, Maharashtra, India. PIN — 413005

ABSTRACT-

The present invention provides an agricultural device that can be operated manually by a single person and is capable of performing tilling, weeding, seeding and fertilizing operations by use of the same device, with minimum manual effort. The device is suitable for use by the Indian farmer where land holdings are small. The device is economically affordable and results in increase in agricultural productivity.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621034077



CIPCIS 2020: P-263

Utensils Washing Glove

Dr. Anand kakade

At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India

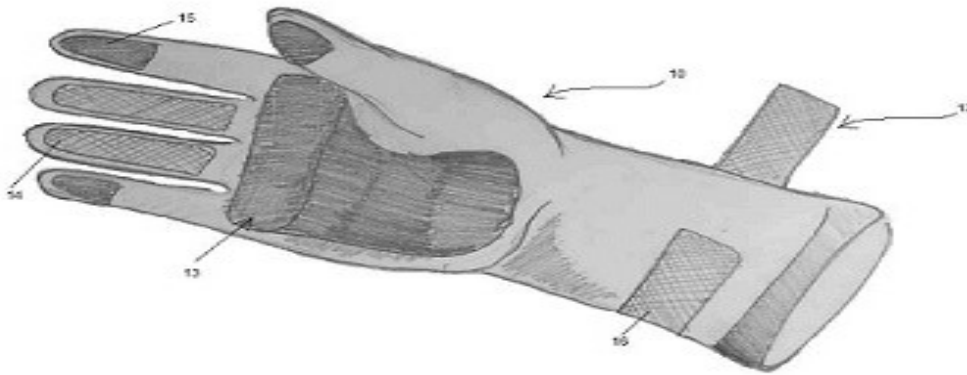
Rajarambapu Institute Of Technology

Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India.

ABSTRACT-

The present invention provides a glove for user-friendly, water-proof cleaning and scrubbing of soiled utensils and various unclean surfaces, where direct contact of skin with the cleaning solution is to be avoided. The glove comprises of abrasive material and hook-and-loop fabric fastener affixed on the upper ends of the finger-receiving members, the palm region and the wrist enclosing region to provide a safe and hygienic cleaning experience to the user. The applications of the invention include dirty utensils, human and pet grooming and industrial applications such as those dealing with construction chemicals, cleaning solvents for walls and floors and toxic and hazardous wastes.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201721016810



CIPCIS 2020: P-264

Multiple Sized Stapler

Dr. Anand kakade¹, Dr.S.K.Patil²

At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India

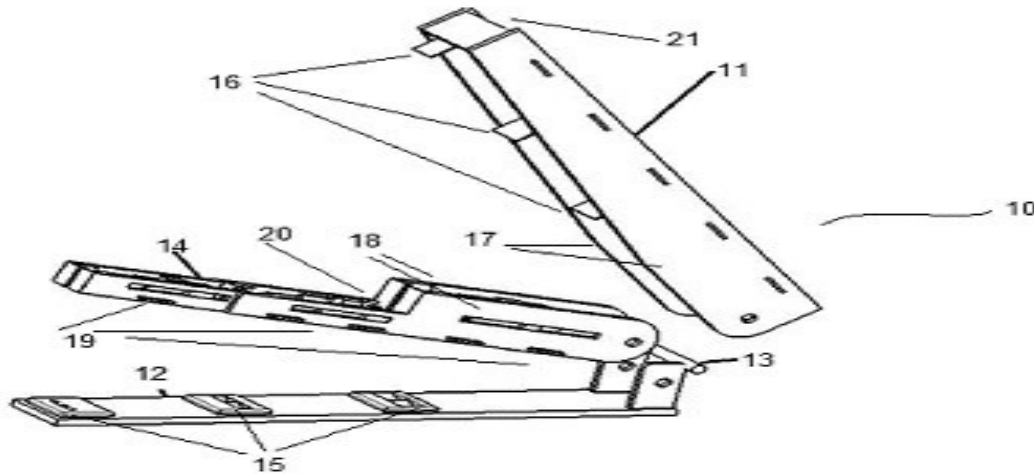
Rajarambapu Institute of Technology

Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India.

ABSTRACT-

The present invention provides a multiple sized stapling device, capable of dispensing multiple staple pins of different predetermined size, according to a user's choice. The invention is capable of dispensing staple pins of various sizes – ranging from two pins to three, four or five pins, which provides flexibility in stapling using different pin sizes. The device is handy and compact, and can be a good replacement for heavy duty stapler. The invention advantageously provides an economical device for maintaining and delivery of multi-sized staples, eliminating the use of multiple staplers for different applications

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201721024732



CIPCIS 2020: P-265

System And Method For Efficient Control Of Room Temperature

Dr. Anand kakade¹, Mr.S.V.Kadam²

At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India

Rajarambapu Institute of Technology

Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India.

ABSTRACT-

The present invention provides a system and method for efficient control of indoor air temperature within a room, after sunset, using ambient air from outdoor. The system comprises a blower assembly, an air distribution assembly, at least one indoor temperature sensor positioned inside the room to detect the indoor air temperature, at least one outdoor temperature sensor located outside the room to detect the outdoor air temperature, and a microprocessor system. A user can set the required temperature within the room and achieve the comfort of required cool or warm indoor environment at an economical cost.

DIAGRAM /SCHEMATIC-

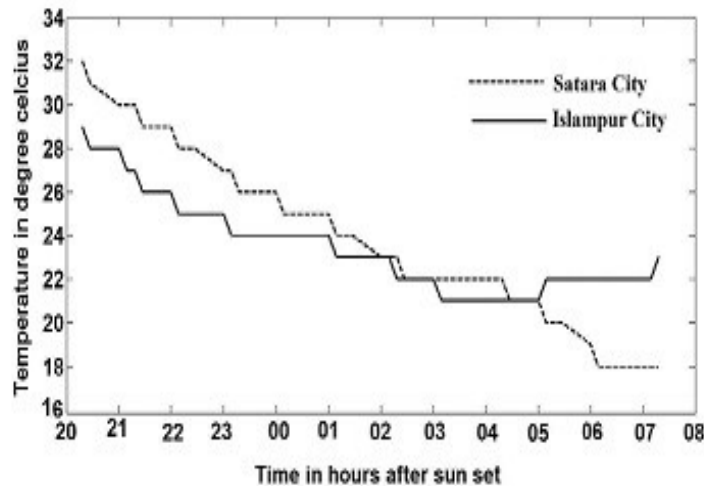


Figure 1: Outdoor temperature after sunset measured in two cities

IPR APPLICATION / PATENT NO. – 201721028962



CIPCIS 2020: P-266

Automatic Sugarcane Plantation Machine

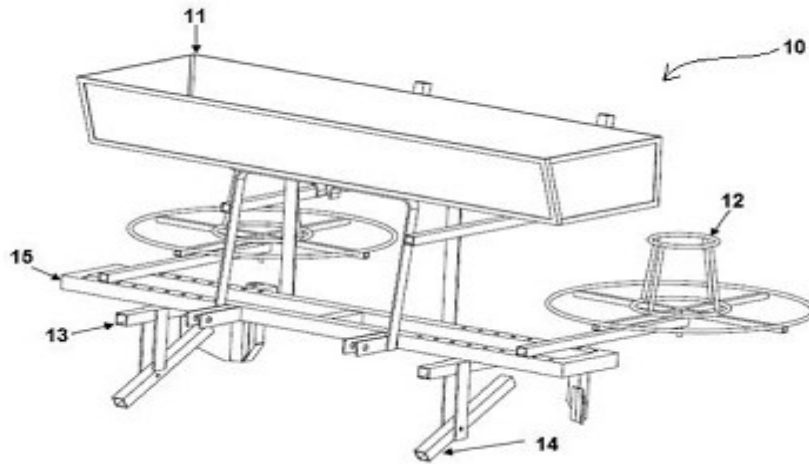
Dr. Anand.B. kakade¹, Mr.Daji Appanna Patil², Mr. Arvind Maruti³
At Chahur, BajiNivas, Post_Krishnanagar, Taluka and District Satara -415 003, Maharashtra, India

Rajarambapu Institute of Technology
Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India.

ABSTRACT-

The present invention provides an automatic sugarcane plantation machine, which is capable of performing efficient sugarcane plantation by ploughing, digging furrows, discharging cut sugarcane pieces in furrows, soil covering, laying drip pipe and fertilizer distribution concurrently. The machine is capable of being customized to suit different sugarcane varieties by adjustment of the distance between furrows. The machine not only saves effort and time, but is also easy to operate. It helps in increasing overall productivity of sugarcane cultivation.

DIAGRAM / SCHEMATIC-



IPR APPLICATION / PATENT NO. – 201821004125



CIPCIS 2020: P-267

Multi-Sided Toothbrush

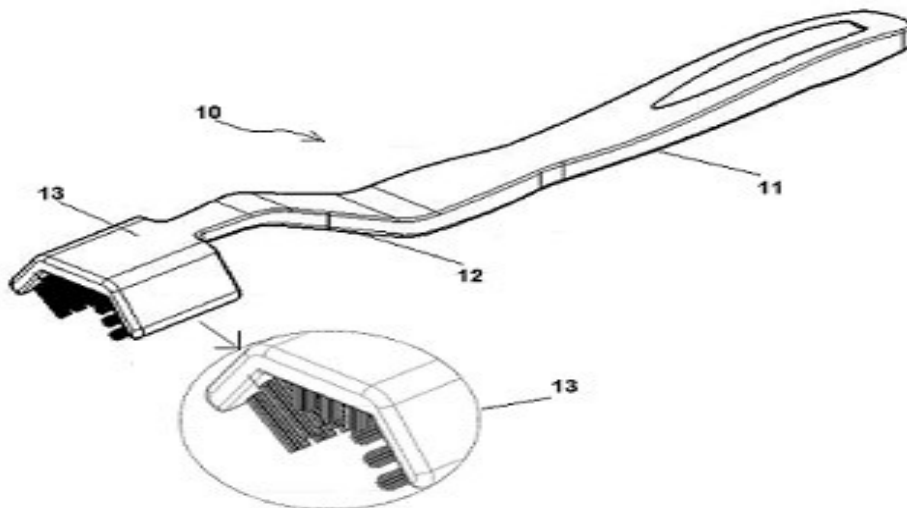
Mr. Attarde Rushikesh¹, Mr.Satish.Salunke², Prof.pratiksha jayawant³

Rajarambapu Institute of Technology
Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India.

ABSTRACT-

The present invention provides a multi-sided toothbrush, capable of cleaning all sides of the teeth simultaneously rather than three different strokes as used in conventional toothbrush. The angle of bristles is kept 45 degree for maximum cleaning of teeth and gum line. For this bristles are provided at central part of brush head as well as on the the side flanks of the brush head. The side flanks of the brush have the bristles inclined so that they make 45 degree angle while brushing the tooth. In the three sided toothbrush time required is reduced due to simultaneously cleaning of all sides of a tooth. Also the human efforts are also reduced with three side cleaning tooth brush.

DIAGRAM / SCHEMATIC-



IPR APPLICATION / PATENT NO. – 201821008931



CIPCIS 2020: P-268

Switching Polarity Multi-Stable Vibration Energy Harvester

Prof. L.M.JUGULKAR¹, Prof. NITIN SATPUTE²

ABSTRACT- The present invention provides a wide band vibration energy harvester device. The operating frequency range ensures utilization of low frequency vibrations that include human motion, highway traffic and an automobile suspension motion. The device has incorporated magnetic non-linearity with an inertial mass constrained to undergo rectilinear vibrations. Furthermore, to utilize a wider spectrum with varying base acceleration, switching magnetic polarity has been incorporated to ensure efficient power output. As compared to existing vibration harvesters with piezoelectric generators, the proposed invention is capable of generating significant and higher electric power. The present invention also has better electric power output for higher base acceleration level.

IPR APPLICATION / PATENT NO. – 201721004160

CIPCIS 2020: P-269

SMA Actuator System for Battery temperature Control

Prof.S.B.Patil¹, Prof.P.M.Jadhav², Mr. Pratik Hiremant³, Mr.Vittal.kore⁴

ABSTRACT- An SMA actuator system is provided to control and manage the temperature of the battery pack of an electric vehicle. The system is efficient and better than the battery cooling systems being used currently, such as air-cooling and water cooling based systems. The present invention is compact and reliable and provides air cooling to the battery pack, as and when required, thus increasing the overall performance efficiency of the vehicle and the longevity of the battery pack.

IPR APPLICATION / PATENT NO. – 201921031455

CIPCIS 2020: P-270

Locking Tongs

Prof.S.B.Khot¹, Mr. Rohit Maskar²,Mr.Amar Gadega³, Mr. Ninad Patil⁴

ABSTRACT- The present invention is a novel tong device capable of being in a locked position and an unlocked position. The device helps a user to hold a utensil with firm grip without requirement of continuous force while carrying the utensil. The problem of slipping of the utensil due wrong orientation of the tong during holding the utensil is prevented. The device comprises of three links engaged in relative motion with each other, wherein relative positions of links takes care of constant force required to hold the utensil and any slippage of the utensil from tong is prevented

IPR APPLICATION / PATENT NO. – 201921031500



CIPCIS 2020: P-271

A Method And An Optomechanical Scanner For Three Dimensional Focused Laser Beam Spot Scanning In Microstereolithography

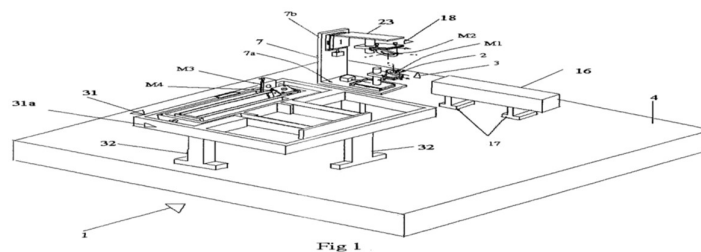
Prof. Deshmukh Suhas Pandurang¹, Prof. Gandhi Prasanna Subhash²

Smaul, Mechanical engineering department, Indian institute of technology, Bombay, Powai, mumbai-400076

ABSTRACT-

A method and an opt mechanical scanner for three dimensional focused laser beam spot scanning. A laser beam is allowed to fall on a first mirror (M1) held in the path of the laser beam with its reflective surface inclined at 45° to the optic axis of the laser beam. The first mirror is linearly movable in the horizontal plane along the Y-axis. The laser beam reflected from the first mirror is allowed to fall on a second mirror (M2) held above the first mirror spaced apart from the first mirror with the reflective surface of the second mirror inclined at 45° to the optic axis of the laser beam reflected from the first mirror. The second mirror is linearly movable in the vertical plane along the Z-axis. The laser beam reflected from the second mirror is allowed to fall on a third mirror (M3) held spaced apart from the second mirror with the reflective surface of the third mirror inclined at 45° to the optic axis of the laser beam reflected from the second mirror. The laser beam reflected from the third mirror is allowed to fall on a fourth mirror (M4) held spaced apart from the third mirror with the reflective surface of the fourth mirror inclined at 45° to the laser beam reflected from the third mirror. The laser beam reflected from the fourth mirror is allowed to fall on a focusing lens (L) held below the fourth mirror spaced apart from the fourth mirror and perpendicular to the optic axis of the laser beam reflected from the fourth mirror. The third and fourth mirrors and the lens together are linearly movable along the X-axis and the fourth mirror and lens together are linearly movable along the Y-axis and the lens is linearly movable along the Z-axis. On-axis scanning is carried out by linearly adjusting the first and second mirrors to allow the optic axis of the laser beam and lens axis to be on-axis and moving the third and fourth mirrors with the lens along the X-axis to carryout X-axis scanning, moving the fourth mirror with the lens along the Y-axis to carryout Y-axis scanning and moving the lens along the Z-axis to carry out Z-axis scanning. Off-axis scanning is carried out by linearly adjusting the first and second mirrors to allow the optic axis of the laser beam and lens axis to be off-axis, moving the first mirror along the Y-axis to carry out X-axis scanning, moving the second mirror along the Z-axis to carry out Y-axis scanning and moving the lens along the Z-axis to carryout Z-axis scanning (Fig 1).

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 270072



CIPCIS 2020: P-272

A Mounting Structure For Magnets

Mr. Tipole Pralhad¹, Mr. Bhojwani Virendra², Mr. Babar Harshal³, Mr. Deshmukh Suhas⁴

¹Flat No.5,S.NO.161/3/3,Suyog Society,Jadhav Nagar,Raykar mala,Dhayari,Pune

²B-7/502, Bramha Majestic co-op society, NIBM road, Kondhwa, Pune

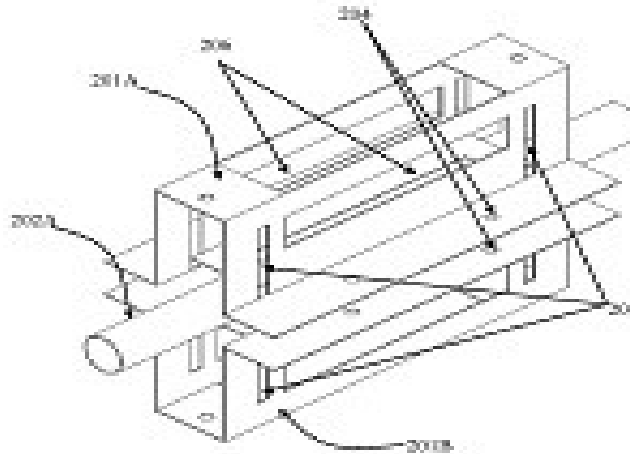
³ Bhagyaday",Plot no.24,Link road,Shivparvati Nagar,Phandharpur

⁴A-1001, Megh Malhar Raga, Behind Maratha Mandir, Bavdhan Chandni Chowk, Pune

ABSTRACT-

A mounting structure for magnets comprises a first mounting element and a second mounting element having a profile identical to the first mounting element. The second mounting element is coupled with the first mounting element to define the mounting structure. The mounting structure further comprises at least one support plate engagable with each of the mounting elements, wherein, in an engaged configuration, the support plates and the mounting elements define an enclosure to accommodate at least one magnet. A passageway is configured operatively between the support plates and is adapted to allow a passage of a conduit there through.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 2573/MUM/2015



CIPCIS 2020: P-273

Pyramidal Solar Still

Mr. Virendra Bhojwani¹, Mr.Ramanathan V², Mr.Suhas Deshmukh³

¹B-7 / 502, Brahma Majestic, NIBM Rd., Kondhwa, Pune

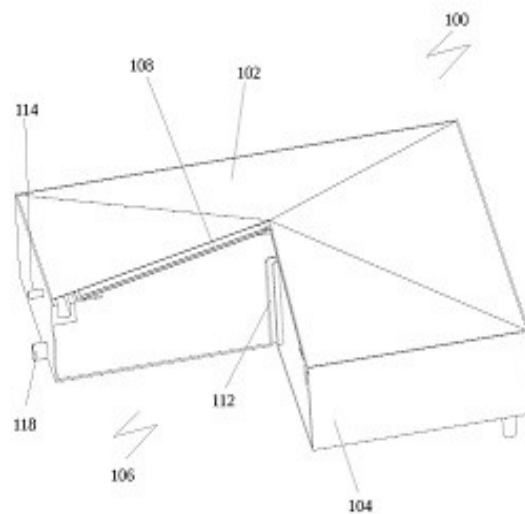
²401 / Dream City, Ambegaon Bk, Pune

³ A- 1001, Meghamalhar Raga, S. No. 54, Bavdhan, Chandani Chowk, Pune bhojwanivk@gmail.com

ABSTRACT-

The present subject matter envisages a solar still for distilling a liquid. The solar still comprises a glass cover disposed over a basin such that the glass covers and the basin defining a housing. An absorber plate is disposed within the housing such that the absorber plate is held substantially parallel to the glass cover. The absorber plate has a hollow profile configured to receive a phase change material therein. A black fabric material is configured to cover the absorber plate and adapted to receive the liquid via a first conduit extending from an inlet opening configured on the housing. An outlet opening configured on the housing to facilitate a discharge of pure condensed liquid collected on an inner surface of the glass cover.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621002282



CIPCIS 2020: P-274

A Mechanism To Conveniently Release Footrest In Vehicles

Supriya Jomde¹, Virendra Bhojwani², Suhas Deshmukh³

¹A-2 Wing Flat no 701, Dream City, Sr. No. 46/1, Datta Nagar, Behind Telco Colony, Ambegaon (Bk.), Katraj, Pune

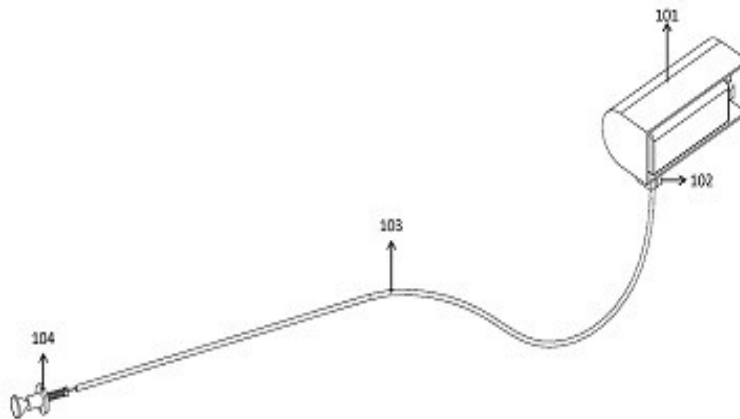
²B-7/502, Bramha Majestic co-op society, NIBM road, Kondhwa, Pune

³A-1001, Megh Malhar Raga, Behind Maratha Mandir, Bavdhan Chandni Chowk, Pune

ABSTRACT-

A mechanism to conveniently release footrest in vehicles, said mechanism comprising; a footrest (101C); a hinge (101E), wherein said hinge (101E) is a fixed member and constrained to the frame of vehicle; a pin (101B) configured to couple the footrest (101C), a spring (101D) and the hinge (101E) and helps to give rotational degree of freedom to the footrest (101C); the spring (101D) configured to provide tension force to the footrest (101C), when footrest (101C) gets released; a sliding pin mechanism box (102); a cable (103) configured to transmit motion; and an actuator 104 configured to transfer motion through a cable to a sliding pin (102B), which moves the sliding pin (102B) axially downward and unlocks the footrest (101C).

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621025659



CIPCIS 2020: P-276

Blood Warmer

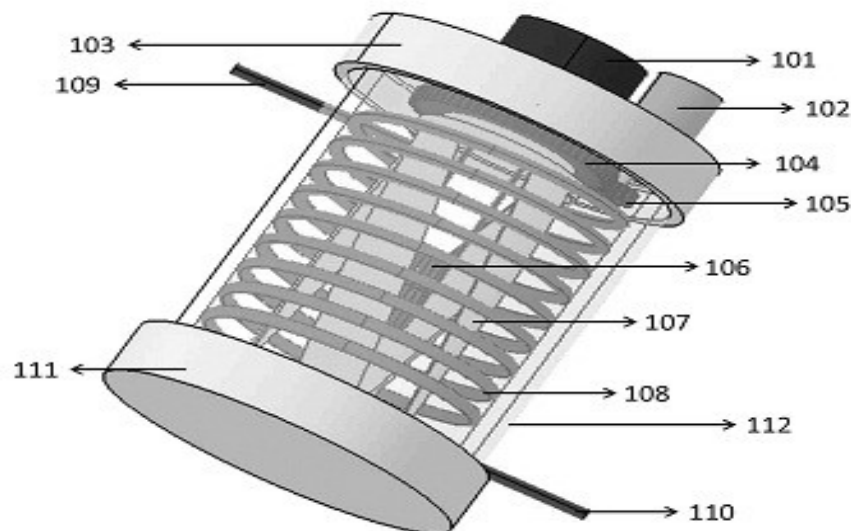
Mr.Suhas Deshmukh

A-1001, Megh Malhar Raga, S. No. 54, NDA Road, Bavdhan,pune

ABSTRACT-

At present before anesthesiologists infuse blood into a patient's body, the blood which is preserved in a blood bag and stored in a cold storage is warmed to the patient's body temperature. If cold blood is injected in patient's body then he may suffer from hypothermia, and on the other hand if blood warmer than 42 degrees is injected then it might cause hemolysis. Some current practices in hospitals to prepare blood for infusion are the use of a heat solder, warm water, the screw blood warmer, heater, running water as well as leaving the blood bags to room temperature. The methods are inefficient, time-consuming and inconvenient for the anesthesiologists. To improve work efficiency of the medical staff, this invention provides high efficiency blood warmer system. The system is portable and simple to operate. The disclosed blood warmer system utilizes two types of technologies for heating blood which gives optimum results.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201721002404



CIPCIS 2020: P-277

Machine Health Monitoring System

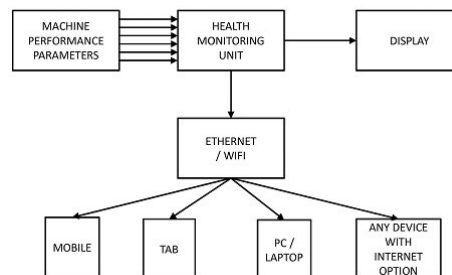
Mr.Suhas Deshmukh

A-1001, Megh Malhar Raga, S. No. 54, NDA Road, Bavdhan,pune

ABSTRACT-

Machines have been an inevitable part of our life in today's era. The health of machines has been a vital aspect in overall life, efficiency, and performance. To check the health of such machines, various devices have been developed in the past which measure vibrations, temperature, noise and power consumption. Any defect in the machine is indicated by no acceptable behavior in these parameters. Vibration is one of the critical factors in the machine health, FFT analyzers are used to measure vibrations in the machine. However, the cost of these FFT analyzers is very high and it becomes difficult to use it for small scale industries. Also, they rarely have a provision to measure the speed, temperature and power consumed by the machine. The present invention is an effort to provide a low cost and sophisticated solution to the existing health monitoring systems along with facility to measure various parameters like triaxial vibrations, noise, rotational speed, temperature and power consumption of machine. Arduino Mega 2560 microcontroller is used along with sensors and integrated to MATLAB GUI to store and display the acquired data. Further, the acquired data is transmitted through wired and wireless networks using Internet of Things (IoT) connected devices. This facilitates the flexibility and accessibility of system parameters for supervisor to optimize the process. The developed device was compared with existing systems and found a good agreement up to 99.175%. This device can be highly useful in the small scale industries where high cost FFT analyzers become obsolete due to costing issue. Time domain is the analysis of mathematical functions, physical signals or time series of economic or environmental data, with respect to time. In the time domain, the signal or function's value is known for all real numbers, for the case of continuous time, or at various separate instants in the case of discrete time. An oscilloscope is a tool commonly used to visualize real-world signals in the time domain. A time-domain graph shows how a signal Page 10 changes with time, whereas a frequency-domain graph shows how much of the signal lies within each given frequency band over a range of frequencies. A function or signal can be converted between the time and frequency domains with a pair of mathematical operators called as transform, i.e. the Fourier transform, which converts the time function into a sum of sine waves of different frequencies, each of which represents a frequency component. The 'spectrum' of frequency components is the frequency domain representation of the signal. The inverse Fourier transform converts the frequency domain function back to a time function. A spectrum analyzer is the tool commonly used to visualize real-world signals in the frequency domain.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201721003774



CIPCIS 2020: P-278

Multi DOF Manual Precision Positioning Mechanism With Motion Amplification

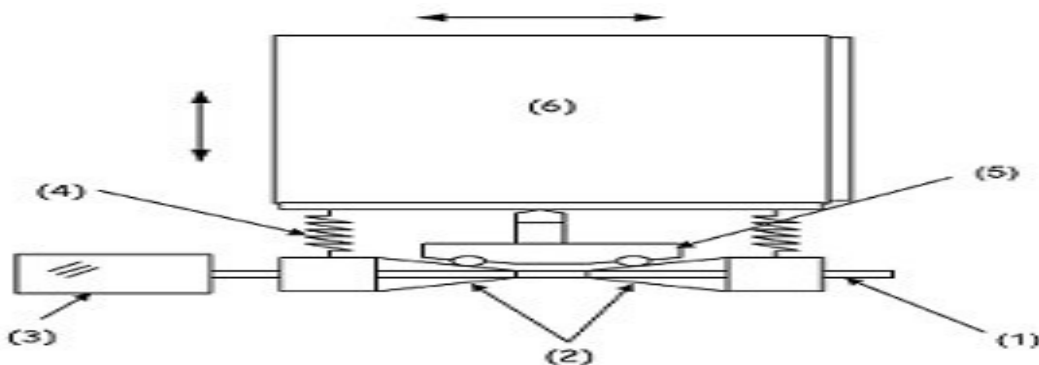
Mr.Suhas Deshmukh

A-1001, Megh Malhar Raga, S. No. 54, NDA Road, Bavdhan,pune

ABSTRACT-

The present subject matter relates to manual precision scanning mechanism for single, two, three or more degrees of freedom. It converts rotary motion into linear motion in perpendicular direction also provides amplification and de-amplification by using combination of LH & RH threaded tapered nuts and LH and RH threaded lead screw.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201721034464



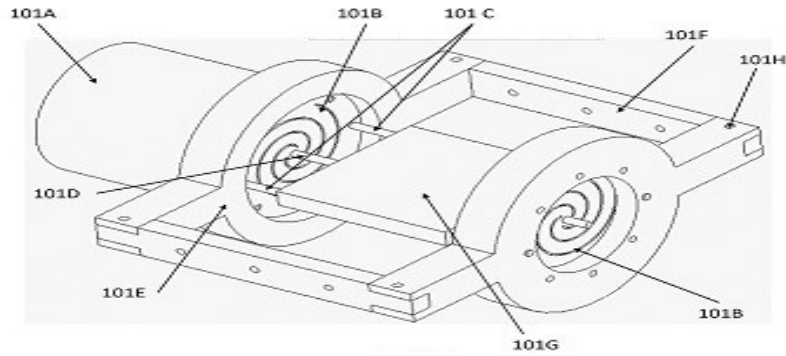
CIPCIS 2020: P-279

Sensor-Less XYZ Scanner For Precision Application

Mr.Suhas Deshmukh

A-1001,Megh malharraga,s.no -54 behind Maratha mandir,bavdhan khurd, pune.info@krishnaandsaurastri.com

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 201621027261

CIPCIS 2020: P-280

Cutting Dies For Kolhapuri Chappal And Automation Thereof

Ganesh Suresh Jadhav¹, Urmi Ravindra Salve², Suhas Deshmukh³

ABSTRACT-

Present invention relates to cutting dies for Kolhapuri Chappal manufacturing, consists two parts one is shoe sole (cutting of base of the Chappal) and heel of the Chappal. Die for shoe and heel will together manufacture Kolhapuri Chappal, die further automate the manufacturing process as against traditional manual manufacturing which involves large no of processes and tools such as sharp edged tool (rappi), current invention helps to make the process automate and improves manufacturing speed as well as accuracy along with reduction in artisans effort.

DIAGRAM / SCHEMATIC –

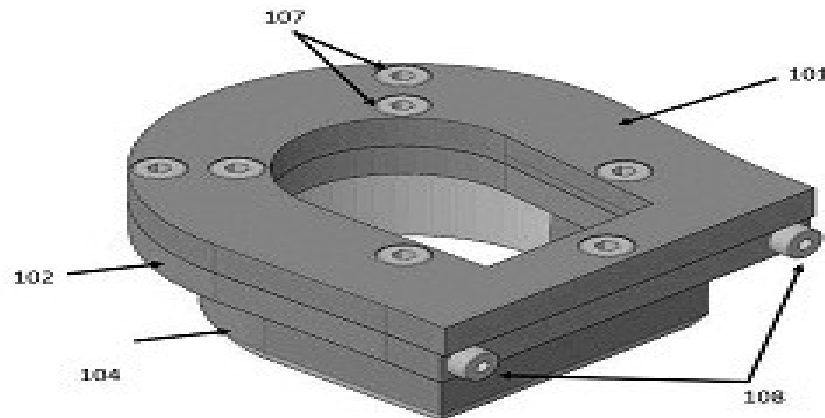


Figure 1

IPR APPLICATION / PATENT NO. – 201821034508



CIPCIS 2020: P-281

Flexure Spring

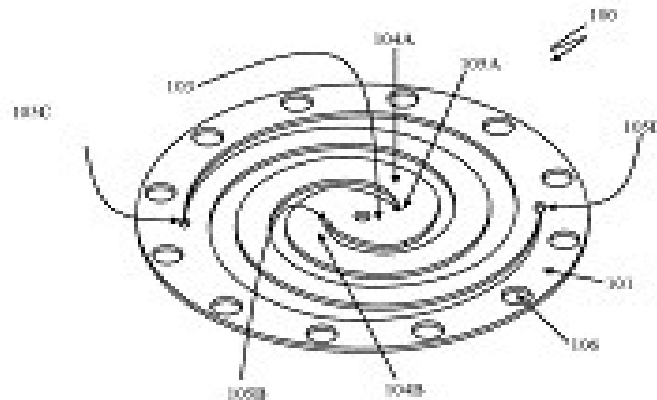
Mr. Mayur Jadhav, Mr. Fayaz Kharadi, Mr. Amit Jomde, Mr. Virendra Bhojwani, Mrs. Madhura Kulkarni

A2-12 Samrat Garden, Behind Vaibhav Theater, Hadapsar, Pune

ABSTRACT-

FLEXURE SPRING A flexure spring having an outer rim and a diaphragm with an integral central core having a shaft opening configured thereon. The flexure spring comprises at least one spiral arm extending circularly in a radially outward direction from the central core, wherein the thickness of the spiral arm is maximum at the initial part of the spiral arm extending from the central core and the thickness gradually reduces along the length of the spiral arm. The flexure spring further comprises at least one stress relief zone defined at both ends of the spiral arms.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 3053/MUM/2015



CIPCIS 2020: P-282

A Drying And Roasting Solar Energy Apparatus And Method Of Using The Same

Prof.S.B.Kumbhar¹, Mr.Samir Bhagvan²

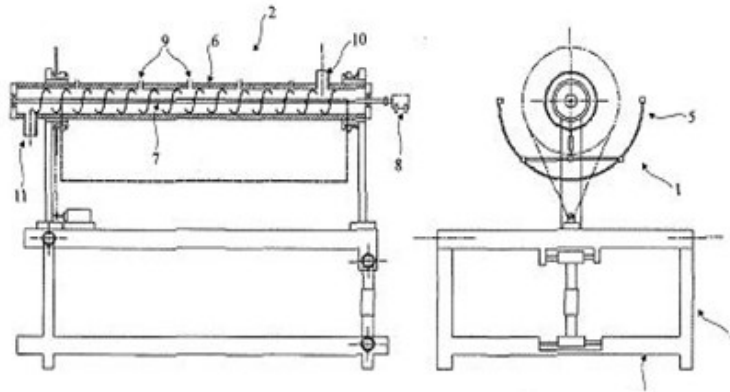
Near Zp School, A/P Narsinghpur (Tal - Walwa, District - Sangli-415409,
Maharashtra State, India

Rajarambapu Institute Of Technology
Rajaramnagar, Sakharale - 415414 (Islampur) Taluka: Walwa, District: Sangli, Maharashtra State, India

ABSTRACT-

The invention relates to the food-processing-industry and drying and roasting solar-energy-apparatus. In the existing systems, where heat is removed from heat-receivers with the help of working fluids like steam, hot water, thermal oil and such other heat-removing agents and supplied to utilization side where food material is to be heat-processed it becomes very difficult to control the operating temperature range applied to food material. In the present invention, a focal-line-location-adjustment-mechanism is provided to enable changing location of focal line of reflector trough with respect to location of center line of heat-receiver-pipe, thereby supplying appropriate needful amount of solar-heat-energy to process the food material at adequate temperature-range. The invention is used in the food-processing industry to dry and roast the food material.

DIAGRAM / SCHEMATIC-



IPR APPLICATION / PATENT NO. – 304/MUM/2013



CIPCIS 2020: P-283

Vibration Massager

Dr. A. P. Kakde

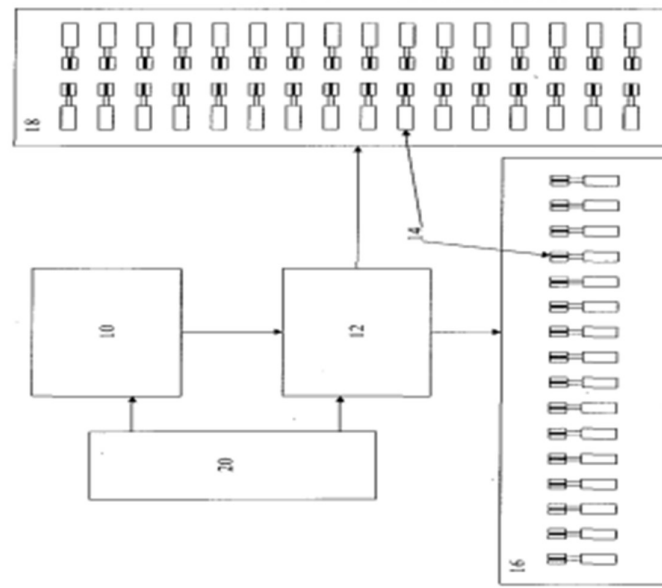
Chahur, Baji Niwas, Post - Krishna Nagar, Taluka & District - Satara, Pin Code 415003, Maharashtra, India.

RAJARAMBAPU INSTITUTE OF TECHNOLOGY
Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India.

ABSTRACT-

The present disclosure relates to a vibration massager configured to provide alterable vibrations of different patterns and varying intensity, frequency and speed. The vibration massager in accordance with the present disclosure comprises a belt, a plurality of vibrators operatively secured to said belt, wherein said vibrators are adapted to generate vibrations, a control system including a driver circuit and said driver circuit adapted to control vibration of said vibrators and a power supply unit adapted to power said plurality of vibrators and said digital control system, wherein at least one of said plurality of vibrators are adapted to generate alterable vibration patterns by varying at least one vibration parameter. A method of generating alterable vibrations by the vibration massager is also disclosed.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 2971/MUM/2013



CIPCIS 2020: P-284

An Apparatus For Preparing Curd

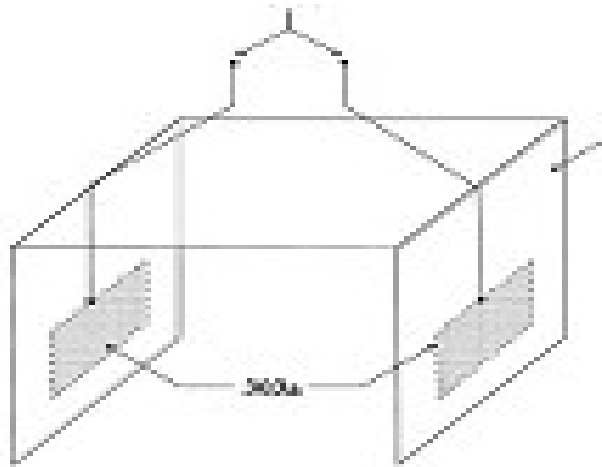
Prof. Kakade Anandrao Bajirao

Chahur, Baji Niwas, Post - Krishna Nagar, Taluka & District - Satara, Maharashtra Pin Code 415003, Maharashtra, India, Rajarambapu Institute of Technology Rajaramnagar, Islampur, Dist. Sangli - 415414, Maharashtra, India

ABSTRACT-

An apparatus for preparing curd, the apparatus comprising: a housing including: a door for accessing a space inside the housing; a vessel disposed within the housing for holding mixture for preparing the curd; and optionally a plurality of supporters for supporting the housing; and a control unit comprising: a temperature meter with a temperature sensor for monitoring temperature in the space; at least one of a curd sensor and a pH meter comprising a pH sensor dipped in the mixture, wherein the curd sensor monitors electrical conductivity of the mixture and the pH sensor monitors pH of the mixture during fermentation process; a heater for heating the space; an intelligent system, typically a micro-controller, coupled to the temperature meter, pH meter and heater, the intelligent system controlling the temperature within the housing thereby controlling the pH value of the mixture; and a power supply for powering electrical and electronic components.

DIAGRAM / SCHEMATIC –



IPR APPLICATION / PATENT NO. – 2972/MUM/2013



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CIPCIS 2020: P-285

System For Piracy Detection And Method Therefor

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Associate Professor, Maharashtra, India, chhaya.gosavi@gmail.com, 9850239897

ABSTRACT-

The present invention relates generally to techniques for embedding a watermark and more particularly, to a system and a method for piracy detection using video watermarking. Video watermarking refers to embedding a watermark in a video sequence in order to provide protection against an illegal use and to identify manipulations if any. An objective of the present invention is to design a robust, blind, imperceptible digital video watermarking methodology to provide copyright protection in a frequency domain to sustain against geometric, signal processing and collusion attacks and to provide watermarking in a video stream as well as in an audio stream of an input video. The system comprises a generation unit, an embedding unit and an extraction unit. The generation unit is adapted to generate a watermark for an input video. The generation unit comprises an input module, a feature extraction module and an output module. The input module is used for entering the input video into the generation unit. The feature extraction module is adapted for extraction of key frames of the input video. The output module generates the watermark corresponding to the input video. The generated watermark comprises a video signature, a time stamp and copyright information. The embedding unit is operably connected to the generation unit and adapted to embed the generated watermark in the input video. The embedding unit comprises a first splitter, a scene change module, a processing module and a first merge module. The first splitter is adapted to split the input video into a video stream and an audio stream, and the generated watermark into sub watermark images. The scene change module identifies scene change frames of the video stream. The processing module processes the sub watermark images to generate sub shares. The processing module also processes the audio stream to generate a watermarked audio sequence and the video stream to generate a watermarked video sequence. The first merge module is adapted to merge the watermarked audio sequence and the watermarked video sequence to generate a watermarked video. The extraction unit is used by a user to detect an authenticity of the input video. The extraction unit is adapted for extracting the embedded watermark from the input video. The extraction unit comprises a second splitter, a scene change detection module, an extraction module, a second merge module and a compare module. The second splitter divides the input video into the video stream and the audio stream. The scene change detection module identifies scene change frames of the video stream. The extraction module is adapted for extracting information embedded in blocks of scene change frames of the video stream and the audio stream to generate the sub shares. The second merge module is adapted to merge the sub shares to reconstruct the watermark. The compare module compares the reconstructed watermark with an original watermark to know the authenticity of the input video.

IPR APPLICATION / PATENT NO. – 331/MUM/2015A



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CIPCIS 2020: P-2866

Innovative System To Improve The Settling Of Sediments In The Water Storage Tank

Gajanan Namdeo Supe

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ABSTRACT-

Many times the crushing industries or construction industries may be located in the area of water sources which deposits huge particles in water, and such water is responsible for blockage of taps, showers and water sprayers connected to water supply system of the building, leaving the layers of sediments on the floors of bathrooms and toilets, which needs regular cleaning, with the wastage of the huge quantity of wate.

IPR APPLICATION / PATENT NO. – 331/MUM/2015A

CIPCIS 2020: P-287

SOLID FUEL DIESEL ENGINE WITH INDUCTION OF SOLID FUEL

Ladekar Chandrakishor Laxman, Khandare Shashikant Shrikumar

A 401,Saidarshan Apartment,Sector No.29,Bhondve Corner,Ravet Pradhikaran,Ravet Pune Maharashtra India Pin-412101

ABSTRACT-

The present invention is related to use of solid fuel as an alternative form of energy in a modified internal combustion engine. The fuel injector of the conventional diesel engine has been replaced with coal carburetor (Coal Power). It has a hopper in which the coal powder of volatile coal is filled with size of 30-75 micron by granulating it from large size coal. The coal pump in the system is working as coal carburetor which is controlled by DC series motor whose speed can be controlled and the rotor of the carburetor is rotated using DC series motor. The metered quantity of coal is taken by carburetor Docket from bonnet and sunnied to the suction manifold X when the pocket goes to intake manifold. The coal is inducted to the engine cylinder manifold in the flowing air. The coal enters the engine cylinder through the intake valve of engine. The mixture of coal and air is heated to very high temperature due to compression of air. The diesel fuel is injected at the end of compression store which self ignite and burns because of which the coal particle is ignited. The flame is generated in the engine due to which the coal particle burns at faster rate producing power at the engine crank shaft. The present system provides use of solid fuel as coal and has an additional feature of coal carburetor to supply coal intake manifold. This system has payback cost of the system and is at par with the liquid fuel engine. It has wide range of applications due to availability of low cost fuel.

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: P-288

Innovative And Efficient Logistic System For Sugar Industries

Anand B. Kudoli, Sudarshan S. Bobade

Assistant Professor, PCCER, Pune, Maharashtra, India, anand.kudoli@pccoer.in.

ABSTRACT- Innovative logistic system for sugar industry through which there will be hike in profit of farmers raw material without compromising profit of the sugar industries, and will increase GDP of the nation against less fuel consumption with sense of environmental impact assessment, permanent solution to road traffic with decrement and control over the accidents, use of speedy transportation vehicles related to the sugar industries will cause less maintenance for existing road infrastructure, and farmers are able to have another crop due to in time response from sugar industries.

IPR APPLICATION / PATENT NO. – 201621030821

CIPCIS 2020: P-289

Innovative And Efficient Smart Calculator With Unit-System

Anand B. Kudoli, Sudarshan S. Bobade

Assistant Professor, Maharashtra, India, anand.kudoli@pccoer.in.

ABSTRACT- Smart Calculator in which input data in any unit-system (SI,MKS,CGS) entered is shown directly on display with numerical value along with its unit, is processed through inbuilt transformation system at the time of entry itself, and solve the problems of millions of users in finding final answer as per their choice in any of above said unit-system, that saves the time of user as a main resource, build confidence of solving the mathematical problems, required less time to convert final answer in various unit, as in every field calculations are required to be carried out with various unit-system, users will enjoy calculations with ease and accuracy

IPR APPLICATION / PATENT NO. – 201621032482

CIPCIS 2020: P-290

An Alteration In Screwdriver To Make It Easy To Grip And Apply More Torque

Suraj Balasaheb Satav

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ABSTRACT-

Tip of screwdriver is kept on target screw, wings are pulled outside so that they will be perpendicular to the cylindrical shaft, for tightening purpose handle is moved in clockwise direction and for removing purpose, it is moved in anticlockwise direction, action of wings is used whenever the grip is required and screws are tight.



CIPCIS 2020: P-291

Co-Passenger Weight Sensing Automatic Opening and Closing Foot Rest of Bike

Nilima Baliram Gadge¹, Rahul Krishnaji Bawane², AniketBhimrao Patil³, SiddheshJalindar Jagtap³, AbhishekRamdas Tonde³, KarbasappaKamannaUmadi³

¹Asst. Prof. Department of Automobile Engg., NCER, TalegaonDabhade, (MS) India, nilimagadge80@gmail.com, 7558545385

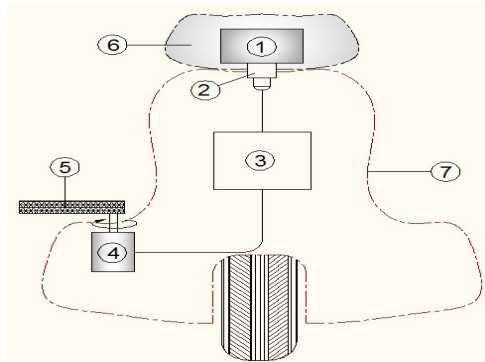
²Asst. Prof. Department of Mechanical Engg., PCCOER, Ravet, (MS) India, rahul.bawane@pccoer.in, 8806668536

³Students, Department of Mechanical Engg., PCCOER, Ravet, (MS) India

ABSTRACT-

This innovation is based on providing a system which senses the load of the co-passenger by using the load sensor and thus a signal send to programmed power supply base which send the corresponding electrical pulse to the DC motor, the said DC motor then convert the electrical pulse into mechanical work in terms of rotation of shaft in particular direction which moves foot rest in outward direction and thus foot rest open to rest the riders foot, when DC motor received opposite programmed electrical pulse then it rotates in opposite direction and move the foot rest inward to closing position, thus this system provide automatic opening and closing of foot rest of two wheeler / bikes by sensing co-passenger weight.

DIAGRAM / SCHEMATIC –



1 : Load Rest Pad, 2 : Load Sensor, 3 : Programmable Power Supply Base, 4 : DC Motor, 5 : Foot Rest, 6 : Bike Seat, 7 : Bike Body

IPR APPLICATION / PATENT NO. – 201821049600



CIPCIS 2020: C- 001

Smart hospital (simple medical advisory report through IOT)

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¹Pravara Rural Engineering College Loni, Maharashtra, India, grsmi18@gmail.com, 9923234201

²Pravara Rural Engineering College Loni, Maharashtra, India, 958454274

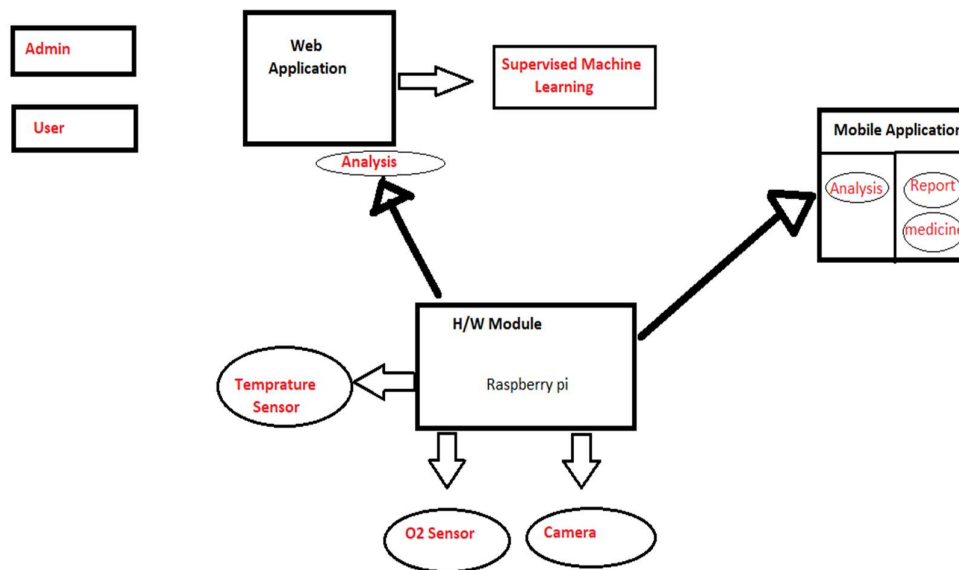
³Pravara Rural Engineering College Loni, Maharashtra, India, 965727028

Pravara Rural Engineering College Loni, Maharashtra, India,

Pravara Rural Engineering College Loni, Maharashtra, India,

ABSTRACT-This project is focused on the monitoring patient's health status and receiving doctor's prescription without physical contact with patient. We can make use of number of sensors in order to precisely detect whether particular person is COVID positive or not. An advanced system can be built that can detect temperature, oxygen level, heart beat and also can take throat picture of a person that will enable doctor to check patient's health condition without physical contact with patient. The person can check that whether he/she has COVID-19 symptoms or not through IoT application. IoT application can compare symptomatic parameters with its normal value followed by generating report and prescription via a web application.

DIAGRAM / SCHEMATIC – Here author has to attach his / her IPR most relevant diagram / schematic.



IPR Acknowledgement / Grant Certificate – Diary No: 4240/ 2021-CO/L



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CIPCIS 2020: C- 002

An Intelligent Approach for Prediction of Learning Disabilities in Children

Shailesh Prabhakar Patil, Dr. Jayashree Rajesh Prasad

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ABSTRACT- Literacy is a tool to progress in life's path. With reading, writing person can explore himself in society. Students having learning disabilities are lagging in academic progress. Learning gap between students with disabilities and normal students increases. These students becomes less motivated with time, gets obstacle in continuing education and struggle in range of less employment. Students suffering through these disabilities often have emotional patterns with frustration and low self-esteem. Learning disability is major problem which is around 10 to 15% of total population. Early diagnosis and assistance of learning disability will be helpful to asses these students and give them remedial solutions. Research on these disorders was going on from decades. Approaches with audio-visuals, paper pencil, gaming approach etc. provided for prediction as well as assessment of learning disabilities in students. In this document various approaches for prediction and assessment of learning disabilities are discussed. Prediction from hand-written text, brain imaging and EEG is complex and requires expertise and hardware setup. Contrary to this, prediction on the basis of eye movement is scalable, accurate and easy to adapt. In this document an approach for prediction of dyslexia from eye movement with the use of webcam is discussed. Webcam based approach is cost effective and doesn't require extra hardware setup. Inclusion of machine learning gives more precise and robust solution.

IPR Acknowledgement / Grant Certificate- Copyright registration- L-98969/2021

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: C- 003

A System and Method for analysis of smart meter data

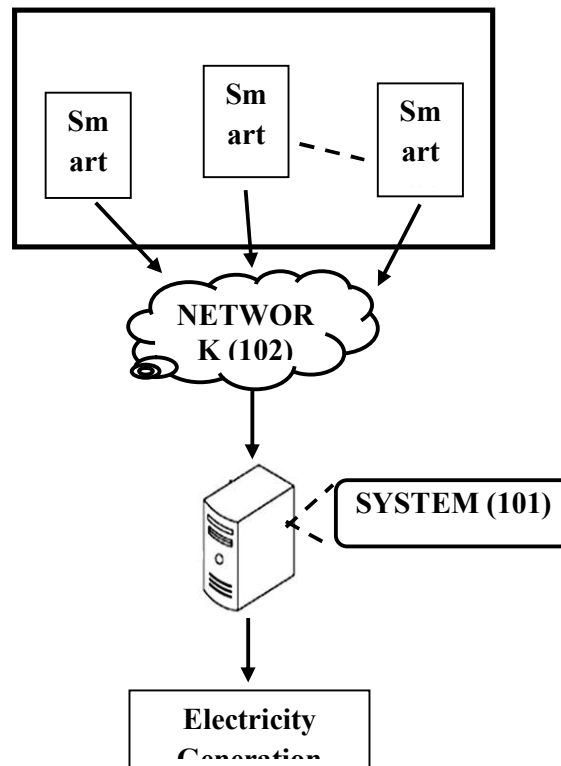
Archana A. Chaudhari¹, Dr. Preeti Mulay²

¹Symbiosis International (Deemed University) Pune, Maharashtra, India, chaudhari.archana12@gmail.com, 8275589285

²Symbiosis International (Deemed University) Pune, Maharashtra, India, preeti.mulay@sitpune.edu.in, 9881103557

ABSTRACT- The present invention discloses a method for improving energy management, enabling reduced energy consumption and load shedding based on analysis of smart electricity meter data. The method discloses an intelligent system, wherein it precisely estimates residential electricity demand by using dynamically generated smart meter data using incremental clustering algorithm. The disclosed invention redesigns and develops a parameter-free incremental clustering algorithm for mining the hidden patterns of electricity load shedding such as season-wise, time (day/night) specific patterns.

DIAGRAM/SCHEMATIC –



IPR Acknowledgement / Grant Certificate – Here author has to attach his / her IPR scan /image of Acknowledgement /Grant Certificate



CIPCIS 2020: C- 004

The Runge kutta 4th order method is used to solve first order ordinary differential equations

Sukhadip M Chougule¹

¹ PIMPRI CHINCHWAD COLLEGE OF ENGINEERING & RESEARCH Plot No. B, Sector no. 110, Gate no.1,
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ABSTRACT- The Runge kutta 4th order method is used to solve first order ordinary differential equations.

Our work is to form a flow chart for this method.

For this we have provided the given data in the form of differential equation $y = f(x,y)$, Initial boundaries x_0, y_0 and x_g, h , now it is required to find y_g at x_g

-First – Start

- Now it is required define the equation $y=f(x,y)$. x_0, y_0 and x_g, h (step size)

-Next it is required to calculate no of iteration using $n = (x_g - x_0)/h$

-now for iteration we are using for loop. In this for $i = 1:1:n$ means when value of $i \leq n$ then only do iteration and when $i > n$ then exit and go for print .

-Now if value of $I = 1$ (for first iteration) and value of $n = 2$, then yes it will perform first iteration as $j \leq n$

So it will calculate

$$K1 = h * f(x_0, y_0)$$

$$K2 = h * f(x_0 + h/2, y_0 + k1/2)$$

$$K3 = h * f(x_0 + h/2, y_0 + k2/2)$$

$$K4 = h * f(x_0 + h, y_0 + k3)$$

$$K = 1/6 * (k1 + 2k2 + 2k3 + k4)$$

$$Y_g = Y_0 + k$$

This Y_g is our answer.

But for second iteration the values of x_0 and Y_0 should change

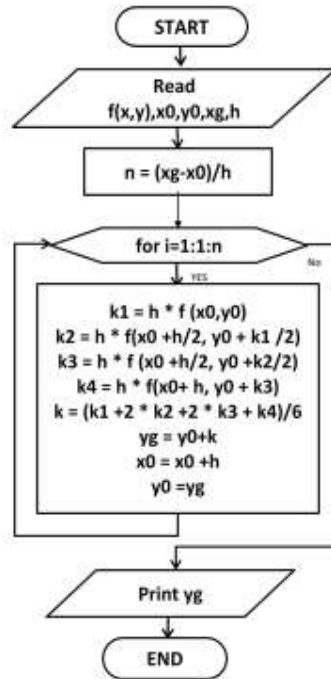
- At last End
- In for loop i.e. $i = 1:1:n$ the middle one is used to increase number of iteration by 1



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DIAGRAM/SCHEMATIC –



IPR Acknowledgement / Grant Certificate – Diary Number : 6147/2020-CO/L

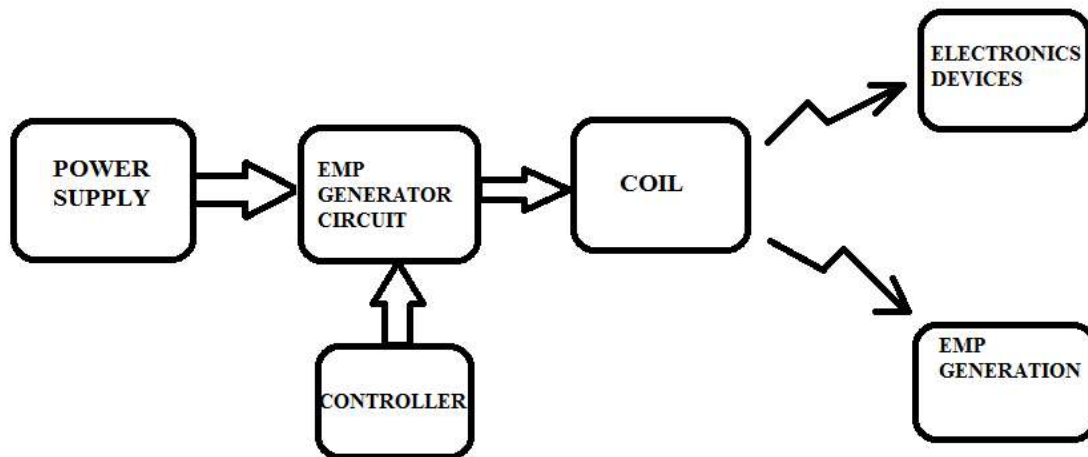


CIPCIS 2020: C- 005

RF & EMP generation and it's effects

ABSTRACT - Now a day where we survive is completely surrounded by electronic circuits and gadgets. In this era we live are can be called as the era of modern electronics gadget. We want everything to be automated. To connect with world the most important thing is the internet which based on electronic gadgets. The EMP is the pulses which can be responsible for disintegrating this Gadget era. In this paper we depict Electro Magnetic Pulse (EMP) meaning, its sources, Methodology for generation, protection methods and its adverse effects on circuits. We have developed small prototype which illustrate its consequence on electronic gadgets .

Many nations are now researching on it that how the EMP can be used as weapons. The North Korea and Russia are much more aggressive to this Research. This EMP is mostly used in Defence and military domain area. The first work on this EMP in Nuclear weapons is in 1945 they had tried to measure the electromagnetic field that would be produced. But the actual effect of EMP is known in the year 1960.



Diary Number:756/2018-CO/L



CIPCIS 2020: C- 006

SOPC based convolution encoding and viterbi decoding

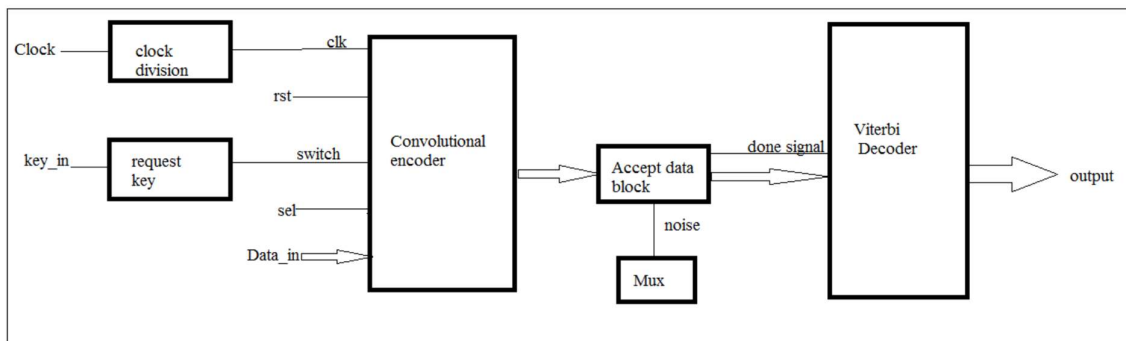
1Anuradha Prasad Kulkarni

SPPU University, Maharashtra, India, anuradhak.kulkarni@gmail.com, 9767009703

ABSTRACT-Viterbi decoder is a basic and important block in any Code Division Multiple Accesses (CDMA). Convolution encoder and Viterbi decoder are widely used in communication system due to error correcting capability. Its performance degrades for variable constraint length. This Project deals with the implementation of convolution encoding and Viterbi decoding using SOPC for variable constraint length of 7, 8, and 9 bits. By analyzing the Viterbi algorithm it is seen that our algorithm has a better error rate for 1/2 code rates.

DIAGRAM / SCHEMATIC – The generalized block diagram of the SOPC based convolutional encoder and viterbi decoder is shown in Figure. It has two main parts -

1. Transmitter
2. Receiver



IPR Acknowledgement / Grant Certificate – L-885402020

CIPCIS2020, February 18-20, 2021



CIPCIS 2020: C- 007

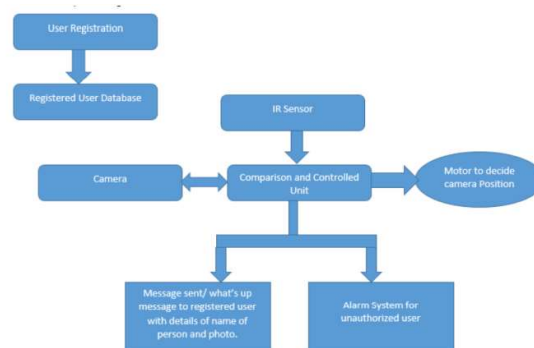
Smart self Authorized stroller

Monali Chinchamatpure¹, Kishor Wane², Asha Pawar³, Mohandas Pawar⁴

¹MITSOE, Maharashtra, India, monalibc@gmail.com, 9922969907

ABSTRACT- Nowadays, both parents work in metro cities and child protection is critical for them as parents are taken care of by caregivers. Stroller is used for new born babies in which the infant normally lies down or can move to other location. If the child is placed inside the stroller, it should be under constant monitoring by parent to keep track of baby's activities. Stroller can be used at a maternity/children's hospital as an assistant to the staff/ nurse who are responsible to look after the baby. The proposed idea of this smart stroller deals with authorized access. It will allow the stroller to be accessible to take away your child by only registered user specially by parents/ care taker/ hospital nurse. Controller will be used to assemble all the sensors and hardware component required. User registration is the first step towards smart stroller, who will be dealing with stroller, need to get registered first. Images of the registered users need to be in database. Second step will be authentication/ verification. In this constant monitoring of the persons coming towards the stroller will be done with camera & IR Sensors. The Smart stroller will also have features of geared motor mechanism. If person is coming from a particular direction it can be detected & accordingly camera can be rotate in the same direction. With the help of face recognition algorithm, face recognition of the person coming towards stroller will be done followed by comparison of the images in data base. As a result of comparison, if any mismatch occurs then alarm system will be activated & at the same time what's App message will be sent to the registered mobile number about unauthorised access. Message includes photo of unauthorised user for further identification process. If registered user is identified then name of registered user will be sent to the registered mobile number.

DIAGRAM / SCHEMATIC –



IPR Acknowledgement / Grant Certificate – L-99052/202¹



CIPCIS 2020: C- 008

Intelligent Automotive Safety of Two-Wheeler Riders

Snehal Patil, Pranav Shirodkar, Komal Shendkar, Akash Wankhade, Professor Kavita Shrivastav .

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Head of Department, Department of Electrical Engineering, Alard College of Engineering & Management Pune, Maharashtra, India, hodelectrical.acem@gmail.com, 9901966224.

ABSTRACT- In today's young generation, the craze to ride bike is rapidly increasing. Two-Wheelers are the most economical way of transport. Owing to this there has been an increase in the number of two-wheelers especially on Indian roads which has led to increase in the number of accidents. As per the survey on road safety, nearly 150000 people die in road accidents in the country every year. One of reason is riding triple seat. Two Pillion riding is also a root of a lot of accidents happening now-a-days. Keeping in mind above problem, an integrated system is designed which will ensure the safety of riders. The integrated design consists of an automatic triple seat detection and fuel mixing circuit. The components are integrated in such a way that the engine of the two-wheeler will start only if the seats occupation is in limited range. Fuel mixing circuit is designed in order to denote whether fuel is mixed with water or not. The main reason of these accidents is due to consumption of alcohol. Alcohol detector is used for detecting alcohol. Alcohol detector is a device that senses a change in the alcoholic content of the surrounding air.

DIAGRAM / SCHEMATIC –

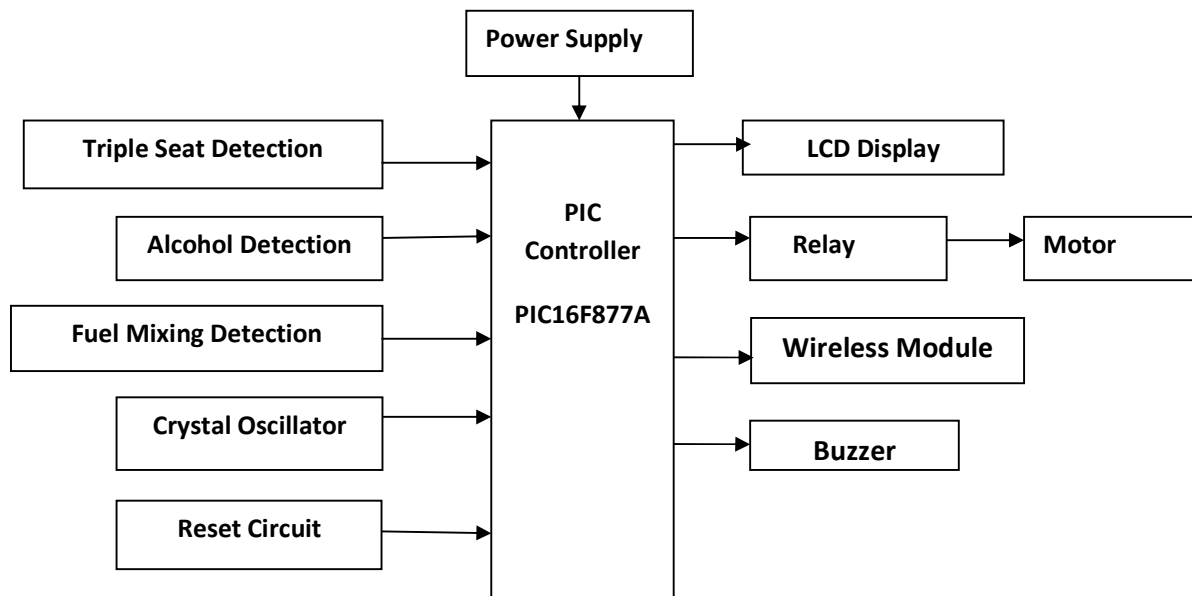


Figure 1: Architecture diagram of intelligent automotive safety of two-wheeler riders.



CIPCIS 2020: C- 009

Effective Disease Prediction and Detection using various Machine Learning Techniques.

Atul Gandhi, Sakshi Walke, Akshay Shelar, Ajay Jarhad, Professor Zarina Shaikh

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BE Student, Department of Computer Engineering, Alard College of Engineering, Maharashtra, India, ajayjarhad1@gmail.com, 9503684664
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ABSTRACT - With the recent development of high-resolution time-of-flight (TOF) antielectron emission pictorial representation (PET) and backbone recovery incorporated within the reconstruction formula, correct detection, and quantification of sub-centimeter nodules would possibly become possible. during this paper, we tend to performed a comprehensive simulation to explore the quantitative accuracy of sub-centimeter nodules victimization the Otsu, Watershed, and GLCM technique. we tend to simulated nodules starting from four to ten millimeters in diameter, with 2:1 to 8:1 distinction level, at 1 Chronicle to 100 percent (70 million) count-level, and with realistic metabolic process motion amplitudes of 5/3, 10/6, and 20/12 millimeter. pictures were reconstructed victimization motion-compensation ordered set expectation Otsu thresholding formula. The results of those studies were consistent. Segmentation victimization the watershed remodel works higher to spot foreground objects and background locations. GLCM feature is going to be computed from the detected respiratory organ nodule in CT image, finally, by victimization the machine learning formula we tend to notice actual carcinoma nodule.

DIAGRAM / SCHEMATIC –

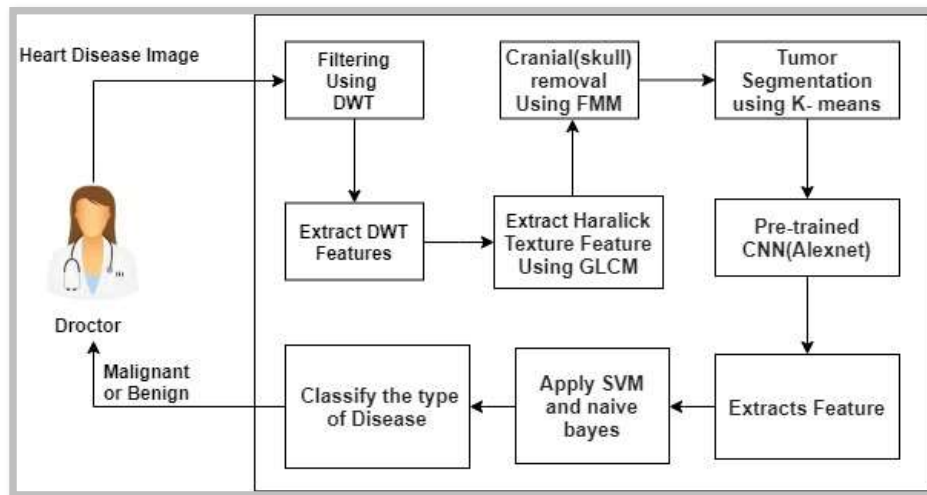


Figure 1: System architecture diagram.



CIPCIS 2020: C- 010

Securely identity based PHR sharing in cloud computing.

**Prathamesh Waikar 1, Ashikesh Nanekar 2, Abhishek Sarkate 3, Aditya Deshpande 4,
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ABSTRACT- In the aid, the sector has resulted in the price-effective and convenient exchange of non-public Health Records (PHRs) among many collaborating entities of the e-Health systems still, storing the confidential health info to cloud servers is prone to revelation or stealing and necessitate the event of methodologies that make sure the privacy of the PHRs. Therefore, we tend to propose a technique referred to as with efficiency sharing Personal Health Record between users and doctors in the cloud. The PHR theme ensures patient-centric management on the PHRs and preserves the confidentiality of the PHRs. The patients store the encrypted PHRs on the un-trusted cloud servers and by selection grant access to different kinds of users on totally different parts of the PHRs.

DIAGRAM / SCHEMATIC –

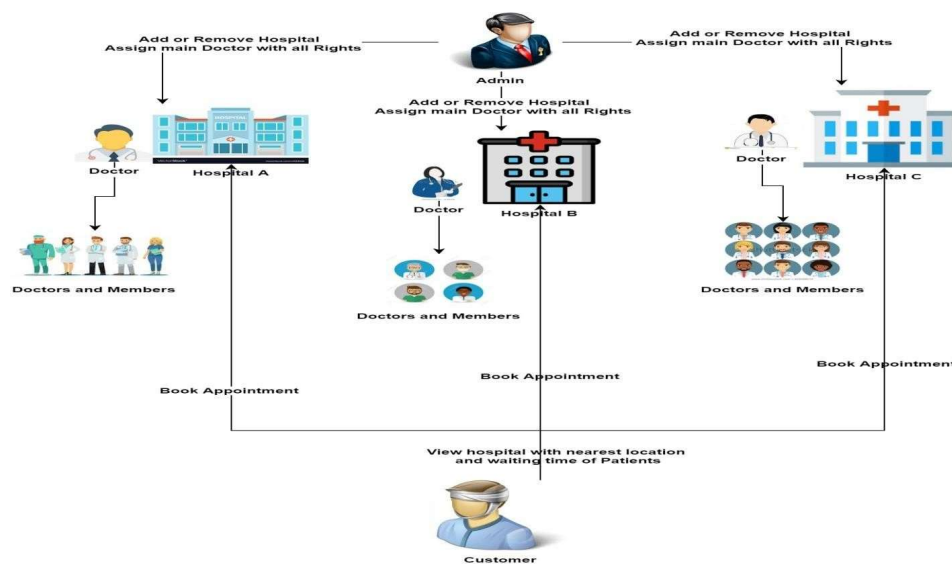


Figure 1 : System Architecture

