Department of Patents, Designs & Trademarks
Ministry of Industries
91, Motijheel C/A, Dhaka-1000
www.dpdt.gov.bd

পেটেন্টের দাখিলকৃত আবেদনসমূহের প্রকাশনা
Publication of filed patent applications

এতদ্বারা জানানো যাইতেছে যে, বাংলাদেশ পেটেন্ট আইন, ২০২২ এর ধারা ১৪ (২) মোতাবেক দাখিলকৃত পেটেন্ট আবেদনসমূহ প্রকাশ করা হইল। উল্লিখিত পেটেন্ট আবেদন সম্পর্কীয় উদ্ভাবনের জন্য পেটেন্ট আবেদনের বিরোধিতা করিয়া যে কোন ব্যক্তি বা প্রতিষ্ঠান বিদ্যমান আইন মোতাবেক প্রকাশনার তারিখ হইতে ৯০(নব্বই) দিনের মধ্যে নির্ধারিত ফরম এর মাধ্যমে বিরোধিতার নোটিশ দাখিল করিতে পারিবেন।

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Enquiries relating to the published documents or any other information as required by anyone should be addressed to the Registrar of the Department of Patents, Designs and Trademarks.

১১/১২/২২

ডেপুটি রেজিস্ট্রার (পেটেন্ট এন্ড ডিজাইন)
ডিপিডিটি

	Patent application		
Serial No	Application No	Year	Patent Number
1	1	2021	
2	3	2021	
3	4	2021	
4	8	2021	
5	10	2021	
6	11	2021	
7	12	2021	
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30	53	2021	

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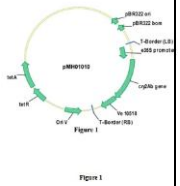
ক্রমিক নং (Serial no.)	উদ্ভাবনের শিরোনাম (Title of the Invention)	আবেদনকারী ও উদ্ভাবকের নাম Name of the Applicant(s) & Inventor(s)	আবেদন দাখিলের তারিখ ও নম্বর (Filing date & Number)	অগ্রাধিকার নম্বর ও তারিখ Priority number & Date	পেটেন্ট-এর শ্রেণি Classification of Patent (IPCs)	বিষয়বস্তুর সার-সংক্ষেপ (Abstract)	অংকন (Drawing)
1.	BRINJAL (SOLANUM MELONGENA) EVENT EE-6726, KIT AND METHOD OF DETECTION OF EVENT EE-6726.	SUNGRO SEEDS PVT. LTD. BHARAT CHAR; RATNAPAL POPATLAL GANDHI and NARENDRAN MADHAVAN NAIR	03/01/2021 BD/P/ 2021/1	IN 202021000170 02/01/2020	C 12N 15/82	The invention provides brinjal event EE-6726, and plants, plant cells, seeds and plant parts comprising event EE-6726 which confers resistance to Lepidopteran insect damage. The invention also provides nucleic acid sequences specific for event EE-6726 and plants, plant cells, seeds and plant parts comprising nucleic acids specific for event EE-6726. This invention also provides methods for detection the presence of the event EE-6726 based on DNA sequence of the recombinant construct inserted into the brinjal genome that resulted in the EE-6726 event and/or the genomic sequences flanking the insertion site.	

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2.	THE PRODUCTION OF SODIUM ALUMINATE (ALUMINIUM ION COMPOUND RECOVERY) FROM WASTE ALUMINIUM BAR".	BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH (BCSIR) Dr. Umme Sarmeen Akhtar, Senior Scientific Officer; Md. Sagirul Islam, Senior Scientific Officer; Khondoker Shahin Ahmed, Scientific Officer and Md. Sahadat Hossain, Scientific Officer	03/01/2021 BD/P/ 2021/3		C 01F 7/04	Sodium Aluminate is one of the most important chemical used in industries for its various applications. In this study, Sodium Aluminate was synthesized from waste alliuminum bar. After washing waste alliuminum bar was dissolved in acidic medium and then treated with Sodium hydroxide. The crude product obtained was recrystalized for maintaining purity which could be used as starinng chemical in industries for various synthesis specially for zeolite. The synthesized sodium aluminate was characterized by gravimetrical chemical analysis. This alternative method of sodium aluminate synthesis lowerd the production cost as well as added simple method.	

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3.	PRODUCTION OF SAFE AND COST EFFECTIVE MINERAL WATER	BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH (BCSIR) Md.Ahedul Akbor, SSO; Md. Ripaj Uddin, RC; Shamim Ahmed, PSO; Rokaia Sultana,SO; Shahanaz Sultana, SO; Shakila Akter, PSO; Md. Abu Bakar Siddique, SSO; Muhammad Abdullah Al Mansur, PSO and Md. Aminul Ahsan, CSO	03/01/2021 BD/P/ 2021/4		A 61K 35/08	Drinking water or potable water is essential for survival and the basic needs of life. It should be rich of mineral profile and microbiologically safe that is directly benefits our health. The quality of BCSIR mineral water's pH, TDS, EC, F-, Cl-, SO42-, NO3-, NO2-, HCO3-, SiO2, Na, K, Ca, Mg, Cr, Fe, Mn, Cu, Zn, As, Cd, Hg and Pb to be 7.0-7.3, 300-400 mg/L, 200-300 µS/Cm, 0.1-0.5ppm, 80-100 mg/L, 250-300 mg/L, 5-10 mg/L, 0.0 mg/L, 200-300 mg/L, 50-60 mg/L, 45-55 mg/L, 4-6 mg/L, 90-110 mg/L, 40-60 mg/L, <0.01 mg/L, <0.01 mg/L, <0.02 mg/L, <0.002 mg/L, <0.05 mg/L, <0.005 mg/L, <0.001 mg/L, <0.001 mg/L, <0.001 mg/L and <0.01 mg/L respectively. Absence of E. coli, Total Coliform and Fecal Coliform are to be ensured. The prepared mineral profiles fulfill the DRI requirement desirable level.	

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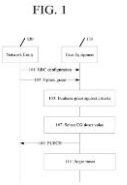
4.	Flexible Data Transmission Methods Considering Configured Grant Timers	Nokia Technologies OY Ping-Heng KUO and Dawid KOZIOL	10/01/2021 BD/P/ 2021/8	US 62/967,844 30/01/2020	H 04W 72/14	According to a first embodiment, a method may include receiving at least one configuration from at least one network entity. The method may further include evaluating at least one received uplink grant against at least one criterion associated with the at least one configuration. The method may further include starting at least one timer according to at least one selected configured grant timer value based on the at least one criterion.	

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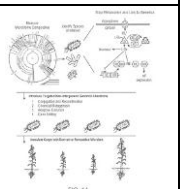
5.	CONSORTIA OF MICROORGANISMS FOR SPATIAL AND TEMPORAL DELIVERY OF NITROGEN	PIVOT BIO, INC. Neal SHAH; Bilge OZAYDIN and Daniel FULOP	12/01/2021 BD/P/ 2021/10	US 62/960,655 13/01/2020	C 05F 11/08	The present disclosure provides consortia of microbes that are functionally optimized for nitrogen fixation and deliver such to plants in a targeted, efficient, and environmentally sustainable manner. The microbes within the consortium differ in nutrient utilization, temporal occupation, oxygen adaptability, and/or spatial occupation, which enables the microbes to deliver nitrogen to a cereal plant in a spatially targeted (e.g. rhizospheric) and temporally targeted (e.g. during advantageous stages of plant's life cycle) manner. The present disclosure also provides methods of creating a synthetic composition of microbes and methods of using compositions of microbes to fix atmospheric nitrogen and deliver such to a crop.	

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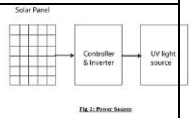
6.	Development of a photo-catalyst based waste water treatment system	Bangladesh Council of Scientific and Industrial Research (BCSIR) Dr. Samia Tabassum, Senior Scientific Officer; Muhammad Shahriar Bashar, Principal Scientific Officer; Sumon Chandra Debnath, Senior Scientific Officer and Ayesha Siddika, Scientific Officer	13/01/2021 BD/P/ 2021/11		A 61F 2/02	For environmental remediation, textile waste water treatment is very necessary To remove dye contents and other organic pollutants, photo catalyst based advanced oxidation process (AOP) treatment system has been achieved a great attention to the researchers because of its versatile applications. In the presence of ultraviolet (UV) irradiation, photocatalyst activates and photocatalytic degradation of dyes ensues. To treat the waste water, a closed system will be developed by which photocatalytic treatment can be carried out over a suspension of photocatalyst or thin film coating inside of glass pipe or coated glass rod. Dye mixed water can flow through the glass pipe and photocatalytic activity generates when UV source irradiates on this system. In this process decolorized and organic pollutant free clean water can be collected as final product. Therefore, the use of photocatalysis in the water treatment technologies accumulation with solar energy source can be a promising path in addressing environmental problems of Bangladesh.	

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7.	A PROCESS FOR THE PRODUCTION OF DEHYDRATED DELICIOUS READY TO EAT PRODUCT FROM AMLA	Bangladesh Council of Scientific and Industrial Research (BCSIR) MUHAMMAD BADRUL ISLAM, Principal Scientific Officer and MUHAMMAD ABDUL JALIL, Principal Scientific Officer	13/01/2021 BD/P/ 2021/12		A 23L 1/212	The present invention disclosed a process for the manufacture of a shelf stable preservative free amla composition, comprising the steps of (a) providing fresh fruit pieces; (b) deactivating or retarding enzymatic browning; (c) osmotic dehydration of fresh amla fruits with additives; (b) osmotically dehydrated in an acidified sugar syrup; (d) oven drying and (c) finally packing the resultant amla product in airtight container. That is, the packaged product will have a reasonably long shelf life and taste and appearance. The dried amla fruit product so prepared is nutritive, preservative free and safe for human consumption from micro-biological point of view and can be used as ready to eat product.	

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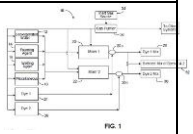
8.	Methods And Systems To Dye Textile Materials With Dye Blend Compositions Having Differential Dye Exhaust Rates	Indigo Mill Designs, Inc. Howard MALPASS; Ralph THARPE; M. Dean ETHRIDGE; Vince LOY and Sudhakar PUVVADA	17/01/2021 BD/P/ 2021/16	US 62/961,917 16/01/2020	D 06B 1/02, 19/00	Processes and apparatus for dyeing a textile product are provided whereby an undyed textile product is introduced into a substantially anaerobic dyeing chamber having an oxygen content of less than 1000 ppm oxygen therein, and at least two dye mixtures having a differential dye exhaustion rate of at least 10% are applied onto the textile product within the substantially anaerobic dying chamber. Thereafter the dyed textile product may be exposed to an oxygen-containing atmosphere so as to oxidize the applied dyes. At least one of the dyes may have a dye exhaustion rate of at least about 25%, or even at least about 50%. The embodiments herein are especially adapted to dyeing of textile products whereby one dye in the at least two dye mixtures is a sulfur dye and another dye in the at least two dye mixtures is a leuco indigo dye.	

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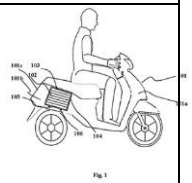
ক্রমিক নং (Serial no.)	উদ্ভাবনের শিরোনাম (Title of the Invention)	আবেদনকারী ও উদ্ভাবকের নাম Name of the Applicant(s) & Inventor(s)	আবেদন দাখিলের তারিখ ও নম্বর (Filing date & Number)	অগ্রাধিকার নম্বর ও তারিখ Priority number & Date	পেটেন্ট-এর শ্রেণি Classification of Patent (IPCs)	বিষয়বস্তুর সার-সংক্ষেপ (Abstract)	অংকন (Drawing)
9.	SOLAR MODULE INSTALLATION IN A VEHICLE	TVS MOTOR COMPANY LIMITED Moumita SARKAR; Sarvani KUCHIBHOTLA; Pramila RAO NILESHWAR and Samraj JABEZ DHINAGAR	17/01/2021 BD/P/ 2021/17	IN 202041004547 01/02/2020	B 60K 16/00	A vehicle (101) with an installation of a solar module (104) is provided. The vehicle (101) includes multiple vehicle body panels (101a, 101b, 101c) and a solar module (104) detachably attached to a vehicle body panel (101b) using attachment device, such as, fasteners (105, 106, 107, 108). The solar module (104) comprises multiple solar panels (103a-103h). The vehicle (101) further comprises a cavity (301) in the vehicle body panel (101b) for accommodating the solar module (104) and the cavity (301) includes a first side (105a, 106a, 107a, 108a) of each of the fasteners (105, 106, 107, 108) configured to mate with a second side (105b, 106b, 107b, 108b) to attach the solar module (104) to the vehicle body panel (101b). The vehicle (101) further comprises a storage space (401) positioned on the vehicle body panel (101b) for securing the solar module (104), wherein the solar module (104) is folded.	

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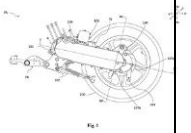
10.	POWERTRAIN FOR A VEHICLE	TVS MOTOR COMPANY LIMITED Chithambaram SUBRAMONIAM; Mugilan MEIBALAN and Ankit RAWAT	17/01/2021 BD/P/ 2021/19	IN 202041004542 01/02/2020	F 16H 57/00	The present invention relates to a powertrain assembly configured to have pressure and oil control system. The pressure and oil control system comprises an oil separator device (105) operatively connected to the transmission system (TS), an oil separator structure (401), and a plurality of control passages (302a, 302b). The fumes formed in the powertrain assembly (PA) exit from the oil separator structure (401) so that oil droplets in the fumes intercepted by the oil separator structure (401) while passing through predetermined path. Moreover, the fumes are introduced in the oil separator device (105) through fume inlet hole (508), wherein filter member (506) separate oil from the fumes and said oil is collected in the drain collector (504) through drain collection hole (509). Further, separated air from the oil is vented out in to the atmosphere after passing filter member (506) through vent hole (507).	

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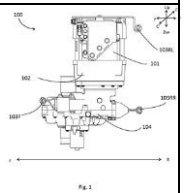
11.	MULTISPEED TRANSMISSION FOR A VEHICLE	TVS MOTOR COMPANY LIMITED Venugopalan PATTABIRAMAN; Gutti GNANAKOTAIAH; Harne Vinay CHANDRAKANT; K PUSPHA PRIYA; Mysore Krishnamoorthy AJAY KUMAR; Kuduva SHANTHULAL VISHNUKUMAR; V VIGNESH and R VARALAKSHMI	17/01/2021 BD/P/ 2021/20	IN 202041004544 01/02/2020	F 16H 3/00	The present invention related to the powertrain (100) having multispeed transmission assembly (200), wherein said multispeed transmission assembly (200) comprises high torque system and low torque system. The powertrain (100) having multispeed transmission assembly (200) ensures efficient transmission accompanied by less noise and smooth gear shift operation. The multispeed transmission assembly (200) configured to have compact layout and less weight is operable by gear shift and select assembly (205).	

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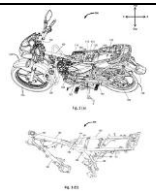
12.	ELECTRICAL CONNECTOR ASSEMBLY	TVS MOTOR COMPANY LIMITED Nagarajan CHANDRASEKAR; Veerareddy JONNALA; Dasarathan SATHISHVARAN and Mayilsamy KALAIVANI	17/01/2021 BD/P/ 2021/24	IN 202041004741 01/02/2020	B 62K 19/40	The present invention relates to an electrical connector assembly (208) consisting of a support bracket (302), USB port (406) and a nut (404) where said electrical connector assembly (208) is sandwich mounted on a stay (304), a housing headlamp assembly (204) and at least one of a turn signal lamp (206a). Also, said electrical connector assembly (208) requires no modifications to be implemented in the existing structure of said housing headlamp assembly (204). Furthermore, one of the aspects of the present subject matter provides said electrical connector assembly (208) at a predetermined angle Q and thus is protected from the external factors such as rain, dust, etc. In addition to it, said electrical connector assembly (208) does not allow the vibrations to affect said USB port (406) and thus, prevents failure of the component. Furthermore, the present subject matter is much easier to assemble and access.	

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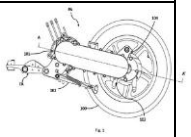
13.	POWERTRAIN ASSEMBLY	TVS MOTOR COMPANY LIMITED Chithambaram SUBRAMONIAM; Mugilan MEIBALAN and Ankit RAWAT	17/01/2021 BD/P/ 2021/27	IN 202041004541 01/02/2020	B 60K 7/00	The present invention relates to a powertrain assembly (PA) comprising of a prime mover (101) which is supported on a primary housing (201), said primary housing (201) enclosing a transmission system. The transmission system includes a drive shaft assembly (DSA) operatively connected to the driven shaft assembly (DSRA) through transmission means (206), a cover member (202), said cover member (202) is detachably attached to the primary housing (201), and a secondary housing (203), said secondary housing (203) enclosing a gear reduction system. Thus, the present subject matter facilitates the working of low torque prime mover (101) using two stage reduction transmission system wherein primary transmission is chain drive and secondary transmission is gear drive, thereby slackness in the chain drive is reduced which increases the efficiency of powertrain assembly (PA). Further, because of low torque prime mover (101) with two stage reduction increases the range of the electric vehicle as less current is drawn by the low torque prime mover (101) but at the same time delivering the optimum	

						torque. Moreover, the slackness in the chain drive due to prolonged usage is compensated by use of guiding and tensioner assembly (GTA).	

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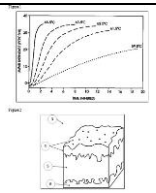
14.	MINIMALLY INVASIVE DEVICE AND METHOD FOR TIGHTENING SAGGING SKIN BY LINEAR TENSING AND STIMULATION OF COLLAGEN PRODUCTION, WHEREIN THE ANESTHESIA, HEAT, AND ADDITIONAL COLLAGEN INDUCTION OR ANTINFLAMATORY FLUIDS CAN BE APPLIED WITH THE SAME APPARATUS AND IN THE SAME AREA	YAE, LLC Fernando FISCHMANN	21/01/2021 BD/P/ 2021/33	US 62/964,961 23/01/2020	A 61B 18/04	The present invention provides an innovative low cost, efficient, short duration, and painless minimally invasive device and method for tightening sagging skin through linear tensing and stimulation of collagen production. More particularly still, the device and method not only allow applying heat directly in the dermis layer of the skin, but also allows for administering an anesthetic and optionally additional ant-inflammatory or collagen induction fluids through the same apparatus. Wherein the apparatus comprises: an insertable energy transfer device having an elongated shape, wherein the device has a hollow body, a tip, and a base and includes: at least one orifice located in the body or tip of the energy transfer device, through which an effective amount of an anesthetic and optionally other treatment fluids can be delivered to a target issue; and a temperature sensor located in the energy transfer device that measures the temperature of the target tissue in immediate contact with the energy transfer device; and an external generation device configured to generate energy that is transferred to the energy transfer	

						device.	

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15.	Carboxylic acid derivative-substituted iminoaryl compound, preparation method, herbicidal composition and use thereof	QINGDAO KINGAGROOT CHEMICAL COMPOUNDS CO., LTD. ZHAO, De; LIAN, Lei; CUI, Qi; HUA', Rongbao and PENG Xuegang	21/01/2021 BD/P/ 2021/34	CN 202010077193.6 24/01/2020; CN 202010117877.4 25/02/2020; CN 202010281666.4 10/04/2020 and CN 202011462769.7 11/12/2020	A 01N 0/00	The invention relates to the field of pesticide technology, and in particular a type of carboxylic acid derivative-substituted iminoaryl compound, preparation method, herbicidal composition and use thereof. The compound, as shown in general formula I: wherein, Q represents , or ; Y represents halogen, haloalkyl or cyano; Z represents halogen; M represents CH or N; W represents OX5, SX5 or N(X5)2; X represents -CX1X2-(alkyl)n-, -alkyl-CX1X2-(alkyl)n- or -(CH2)r-; X3 and X4 each independently represent O, S, NH or N-alkyl, etc.. The compound has excellent herbicidal activity against gramineous weeds, broadleaf weeds, cyperaceae weeds and so on even at low application rates, and has high selectivity for crops.	

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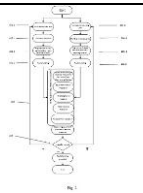
16.	CTC3.0-BASED IMPLEMENTATION METHOD FOR ROUTE HANDLING OF REGIONAL CENTRALIZED CONTROL STATION	CASCO SIGNAL LTD. CHEN Xuan; WANG Xingli; LI Huarong; FEI Zhenhao; WU Xiang; FENG Zhenguo; WANG Jiannian and CAO Yahui	24/01/2021 BD/P/ 2021/35	CN 202010099863.4 18/02/2020	B 61L 27/04	The present invention relates to a CTC3.0-based implementation method for route handling of a regional centralized control station. The method is based on a CTC3.0 technology, and includes the following steps: step (1): generating multi-station train and shunting plans according to a multi-station planning terminal, and executing steps (2) and (4) at the same time; step (2): sending the train plan to an autonomous computer to generate a train route sequence, and executing step (3); step (3): sending, by the autonomous computer, the train route sequence to a regional centralized control route handling terminal; step (4): compiling, by the multi-station planning terminal, an automatically generated shunting route sequence in the shunting plan, and executing step (5); and step (5): synchronizing, by a center service, the shunting route sequence to the regional centralized control route handling terminal. Compared with the prior art, the present invention has the advantages of wide applications, safety, convenience, capability of effectively realizing multi-station management of a regional	

						centralized control station, and the like.	

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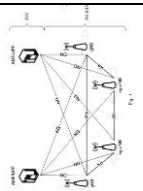
17.	RADIO NETWORK NODE, USER EQUIPMENT, AND METHODS PERFORMED IN A COMMUNICATION NETWORK	Telefonaktiebolaget LM Ericsson (publ) Oscar Ohlsson; Icaro Leonardo Da Silva; Cecilia Eklöf; Johan Rune and Pontus Wallentin	26/01/2021 BD/P/ 2021/37	US 62/967,059 29/01/2020	H 04W 36/22	Embodiments herein relate e.g. to a method performed by a first radio network node (12) for handling communication in a wireless communication network. The first radio network node transmits, to a UE (10) served by the first radio network node in a first cell (11), a message for the UE (10). The message includes an indication for a reconfiguration for communicating with the first radio network node (12) in the first cell during a handover of the UE (10) to a second cell, wherein the message is associated with a configuration for handing over the UE to the second cell based on whether an execution condition is fulfilled or not, and/or for maintaining a connection to the cell while a connection to the second cell is being established. The first radio network node then receives information, from the UE (10), indicating that the UE (10) has applied the reconfiguration.	

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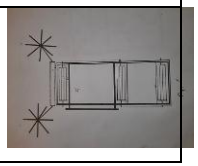
ক্রমিক নং (Serial no.)	উদ্ভাবনের শিরোনাম (Title of the Invention)	আবেদনকারী ও উদ্ভাবকের নাম Name of the Applicant(s) & Inventor(s)	আবেদন দাখিলের তারিখ ও নম্বর (Filing date & Number)	অগ্রাধিকার নম্বর ও তারিখ Priority number & Date	পেটেন্ট-এর শ্রেণি Classification of Patent (IPCs)	বিষয়বস্তুর সার-সংক্ষেপ (Abstract)	অংকন (Drawing)
18.	Road Cleaner Machine	Md. Jiaur Rahman Md. Jiaur Rahman	27/01/2021 BD/P/ 2021/38		C 12P 17/12		

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19.	A Root Vegetable Washing Machine	Bangladesh Agricultural Research Institute Dr. Md. Nurul Amin, SSO, FMPE Division; Dr. Md. Ayub Hossain, CSO, FMPE Division; Dr. Md. Shoeb Hassan, CSO, FMPE Division; Dr. Md. Israil Hossain, CSO, FMPE Division; Dr. Muhammad Arshadul Hoque, SSO, FMPE Division and Md. Sumon Miah, SO, FMPE Division	04/02/2021 BD/P/ 2021/40		D 06F 45/12	The invention relates to agricultural machinery, in particular to a motor root vegetable washing machine. The utility model is intended to provide a use can be labor-saving, time-saving batch type machine. The Root Vegetable Washing Machine comprising half circle tank that is MS sheet and MS angle bar which was welded to a separate frame of MS angle bar. The holding capacity is 110-120 kg/batch. Functional part of the root vegetables machine is brush roller. Brush roller was made of fibre shaft along with nylon brush. The sprocket was welded with the MS shaft. The other end of the shaft was inserted into the bearing that fixed with tank to rotate easily. The brush rollers are rotated by means of chain and sprocket. Power was transmitted to shaft of the roller from motor by chain and sprocket. All (Ten) brush rollers were rotated clockwise. It was used to clean of mud from the root vegetables and convey the vegetables from one end of the machine to another. Electric motor or diesel engine is used for rotating the washing machine. Power was transmitted to the shaft of the brush rollers from shaft of gear reducer by	

						chain and sprocket. Speed the roller is 115-120 rpm. In figure 5, it is one of the essential parts of the washing machine to supply water for cleaning vegetables. Electric water pump is used to supply water for washing of vegetables. A single perforated pipe is placed horizontally that was fixed on the longitudinal sides over the machine. Water flow was maintained by a regulator valve.	

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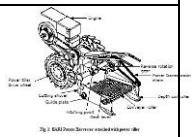
20.	A BARI Potato Harvester Machine	Bangladesh Agricultural Research Institute Dr. Md. Israil Hossain, Director General; Dr. Muhammad Arshadul Hoque, Senior Scientific Officer and Dr. Md. Ayub Hossain, Chief Scientific Officer	04/02/2021 BD/P/ 2021/41		A 01D 21/00	The invention relates to agricultural mechanization, in particular to reduce the labour crisis and to reduce the cost of potato production. A low cost two-wheel tractor driven potato harvester has been developed and improved with locally available materials in Farm Machinery & Postharvest Process Engineering Division of BARI, Gazipur to facilitate small farmers to harvest their potatoes at low cost. The developed potato harvester is a semi-automatic digging machine consisting of cutting blade, conveyer chain, depth controller and reverse rotation gear box. The overall dimension ws 900 mm x 850 mm x 950 mm. The field capacity of the potato harvester covers daily average 1.2 ha land depending on operator skillness. Potato harvester requires labour 21 per ha only instead of 60 labours per ha in traditional manual method. Total cost of potato harvesting by the potato harvester is Tk. 11,935 per ha but manually harvesting cost is Tk. 29,600 per ha Moreover, there are no potatoes remain under the soil. Potato damage percentage is less than 1.2%.	

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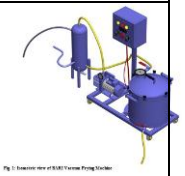
21.	A BARI Vacuum Frying Machine	Bangladesh Agricultural Research Institute Dr. Muhammad Arshadul Hoque, Senior Scientific Officer; Dr. Md. Golam Ferdous Chowdhury, Senior Scientific Officer; Md. Hafizul Haque Khan, Chief Scientific Officer; Dr. Md. Miaruddin, Director Research wing; Mahfujul alam, Scientific Officer; Dr. Md. Monirul Islam, Director; Ashfak Ahmed Sabuz, Scientific Officer and Dr. Mohammad Mainuddin Molla, Senior Scientific Officer	04/02/2021 BD/P/ 2021/42		A 47J 37/10	The invention relates to agricultural food processing and product development machinery, in particular to an electric power operated small scale low cost unique vacuum frying machine. The utility model is intended to provide an attractive organoleptic quality and highly nutritious real fruit and vegetable chips manufacturing using novel method of vacuum frying technology. The BARI vacuum frying machine comprising of control panel, frying chamber, condenser unit and two stage vacuum pump. The fabricated BARI vacuum frying machine comprises of basic part of control panel, frying unit, condenser unit and vacuum pump. The frying chamber is set over a stainless steel made chassis which is welded to a separate frame of SS angle bar. Overall dimension of the chassis (L×W×H) is 860×390×40 mm. The air tight aluminum /stainless steel sheet made frying chamber capacity is 15 liter vegetable oil content with the diameter of 412 mm and 360 mm height. Two electric heater of 4000 watt, 220V, AC type inserted at the bottom of the frying chamber and connected with control panel.	

						Frying unit also belongs to a frying basket (300 × 210) mm. Total electric supply system and temperature controlling is maintained from the control panel. Water cooled condenser is added to exchange heat of steam produced in frying chamber through vertical cooling tubes. Two-stage oil type vacuum pump (1 Hp) (Free air displacement: 9 CFM) (Model: VP 280) is used to maintain optimum vacuum pressure in the frying chamber. To evaluate the performance of the designed machine vacuum fried jackfruit, banana, sweet potato, potato, giant taro and carrot chips is prepared at different frying temperature and time to optimize the suitable frying temperature and time. It was observed that 800 – 1000 g processed raw samples can be used for frying per batch to produce 400 - 500 g fried chips. Frying temperature, time and pre-treatment of the raw samples varies from products to products. Commercial vacuum frying machine purchasing cost is too high and not available in Bangladesh. For that reason the small scale low cost BARI vacuum frying machine is fabricated which costs around 1200~1400$. The parts and equipment's used to manufacture the machines are cheap and available in the local market and easily possible to repair by local workshop avoiding import dependency. So, the developed machine would be beneficial to the small and medium entrepreneurs (SME) level and stakeholders for producing quality fruits and vegetables chips products.	

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22.	A BARI De-oiling Machine	Bangladesh Agricultural Research Institute Dr. Muhammad Arshadul Hoque, Senior Scientific Officer; Dr. Md. Golam Ferdous Chowdhury, Senior Scientific Officer; Md. Hafizul Haque Khan, Chief Scientific Officer; Dr. Md. Miaruddin, Director Research wing; Mahfujul alam, Scientific Officer; Ashfak Ahmed Sabuz, Scientific Officer; Dr. Md. Monirul Islam, Director, Nutrition Unit and Dr. Mohammad Mainuddin Molla, Senior Scientific Officer	04/02/2021 BD/P/ 2021/43		B 41F 15/08	The invention relates to agricultural food processing and product development machinery, in particular to an electric power operated small scale low cost unique de-oiling machine. The utility model is intended to provide an additional benefit to prepare low fat content healthy fried chips especially vacuum fried chips. The fabricated BARI de-oiling machine comprises of basic part of control panel, de-oiling chamber, lid and centrifugal pump. The de-oiling chamber is set over a stainless steel made base which is welded to a separate frame of SS angle bar. Overall dimension of the base (L×W×H) is 560×360×350 mm. The de-oiling chamber is stainless steel sheet made vertical cylindrical shape chamber of 400mm height and 390 mm diameter. In which a perforated sheet of stainless steel cylindrical de-oiling basket of 240 mm dia and 230 mm height is attached with the shaft of pulley and self-center bearing by rubber belt to the shaft of the induction motor. The induction motor power is 1.5 horsepower and speed is 1400 rotation per minute (rpm). It is possible to de-oil 600-800g	

						fried chips per batch. After de-oiling the extracted oil can be collected in a jar and reused for further frying which minimizes the product manufacturing cost also. The de-oiling time can be automatically controlled and fixed by a time controller and emergency stop switch for safety purposes. Different vacuum fried products are de-oiled at 1400 rpm for different de-oiling time intervals to observe the machine de-oiling capacity for each product. The minimum and maximum de-oiling percentage was found in vacuum fried taro chips 4.7% and vacuum fried jackfruit chips (19.47%) after 5 minutes de-oiling at 1400 rpm. It was also observed that after 3-4 minutes de-oiling time at 1400 rpm extracts optimum oil from the fried chips. The machine spare parts are available in Bangladesh and can be easily manufactured in local workshop according to the specifications of the designed small scale low cost de-oiling machine. The overall machine cost was about 500-550$. The developed machine will be beneficial to the SME (small and medium entrepreneurs) level for producing losw oil content quality fruits and vegetables chips products.	

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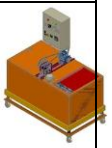
23.	A Hot Water Treatment Plant	Bangladesh Agricultural Research Institute Dr. Md. Nurul Amin, SSO, FMPE Division; Dr. Md. Ayub Hossain, CSO, FMPE Division; Dr. Kshirode Chandra Roy, CSO, FMPE Division; Md. Shafiul Alam, CSO, FMPE Division; Dr. Md. Abdul Wohab, CSO, FMPE Division and Dr. Md. Abdul Matin, SSO, FMPE Division	04/02/2021 BD/P/ 2021/44		F 24D 9/02	The invention relates to agricultural machinery, in particular to an electrical power operated plant. The utility model is intended to provide a use can be labor-saving, time-saving, disease controlled movable plant. The Hot Water Treatment Plant comprising water tank, roller conveyer, electric heaters, temperature controller, sensor, power transmission, cover, insulation, whereas- water tank is rectangular water is stand over the four legs; roller conveyer is placed at 6 cm over bottom of the water tank which is operated by an electric motor through chain sprocket; electric heaters is situated horizontally between the clearance of bottom of the water tank and roller conveyer; temperature controller, magnetic contact and circuit breaker is connected each other; and sensor is connected with the temperature controller; power transmission included electric motor, gear reducer, pulley, belt, chain-sprocket, two covers is used for input of loaded crate and other is delivery of loaded of treated mango; water tank is covered with surrounding the six walls with cork sheet as insulation materials. A metering plate is 171	

						mm & there are 24 seed inlet holes in a single metering plate whereas the number and shape of seed inlet hole differ based on types of seeds; the inner radius of the seed inlet hole is 6.5 mm and gap between two successive holes is 7.35 mm; the cross sectional view defines it as an inclined type seed metering plate whereas the diameter of the central hole is 28 mm. A seed metering plate holder is a stationary part made of mild steel whereas the overall diameter is 173 mm & is situated in middle of a 200 mm single unit rectangular base, there is an amputated rectangular part of 36 mm in one side of the plate holder which facilitates the dropping of seed in seed tube. Complete seed box is characterized in that: six seed hoppers comprise a unit, side length is 1200 mm and width 596 mm; power is transmitted from wheel shaft to main frame through chain and sprocket; as the shaft rotates, 3 hoppers rotate clockwise while the rest rotate anti-clockwise & thus the seeds pass through seed tube and roller closes the furrow.	

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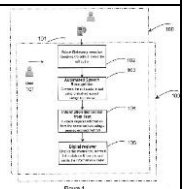
24.	A SYSTEM AND METHOD FOR STANDARDIZATION OF VOICE DATA	Hishab Technologies Limited Zubair Ahmed; Mio Ahmed; Michael Schmitz; Mohammad Fayadan Hossain; Naziba Mostafa and Md. Kowsher	04/02/2021 BD/P/ 2021/45		G 06F 5/00	The present invention describes asystem comprising of a voice gateway module 102 which receives an audio data from the user 101 and stores the audio data. An automated speech recognition module 103 fetches the audio data from the voice gateway module 102 and processes the audio data and converts the audio data into text S using pre trained speech recognition models. An information extraction module 104 which extracts the information from the text and performs standardization of the text into plurality of standardized phrases 201A' and plurality of standardized fields (201C', 201E') corresponding to the phrases 201A'. Since, thevoice data from a user 101 is processed into a standardized information set 200, it is very convenient to process the information efficiently thereby saving time, effort which increases the processing efficiency of random / unstructured voice data.	

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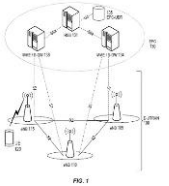
25.	RECEIVER ASSISTED DIRECTIONAL CHANNEL SENSING FOR NR-U	Telefonaktiebolaget LM Ericsson (publ) Yuhang Liu; Jung-Fu Cheng; Peter Alriksson; Tai Do and Aliakbar Mirzaei	04/02/2021 BD/P/ 2021/46	US 62/971,033 06/02/2020	G 01S 19/25	Afirstgroup embodiments provide a method performed by a network node (NN) in a wireless network comprisingresponsive to a DL data intended for a user equipment(UE),transmitting a first short signal burst to the UE over a channel using a directional beam, andbased on detecting a first response to the first short signal burst from the UEindicating that the channel is available, transmitting at least a portion of the DL data to the UE over the channel using the directional beam.A secondgroup embodiments provide amethod performed by a NN comprisingdetermining availability of a channel between the network node and the UE using a directional beam, based on determining that the channel is available, transmitting a first resource grant for transmission of a UL data by the UE, andreceiving the UL data from the UE over the channel using the directional beam.	

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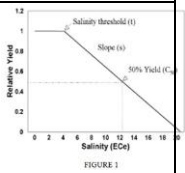
26.	METHODS AND COMPOSITIONS FOR PRODUCTION OF SALINE TOLERANT PLANTS	AGRISEA CORPORATION; Rory James HORNBY and Luke YOUNG Rory James HORNBY and Luke YOUNG	07/02/2021 BD/P/ 2021/48	US 62/970605 05/02/2020	C 11D 3/38	Described herein are methods, compositions, and systems for production of saline tolerant plants. In some cases, such plants are produced by genome editing.	

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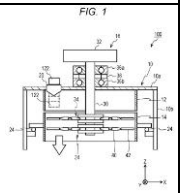
27.	ROTARY CRUSHING APPARATUS AND ROTARY CRUSHING METHOD	JDC CORPORATION Akimitsu EBIHARA; Hiroshi OBATA and Hidetoshi MORIMOTO	07/02/2021 BD/P/ 2021/49	US 62/971,287 07/02/2020	B 02C 23/20	In order to enable an impact applying member to efficiently crush an object to be crushed, a rotary crushing apparatus includes: an impact applying member that is connected to a rotating shaft, and crushes a processing object by means of rotation of the rotating shaft; and a feeding device that feeds the processing object to the impact applying member in such a way that an axis direction of conveyance of the processing object is substantially identical to an axis direction of rotation of the impact applying member.	

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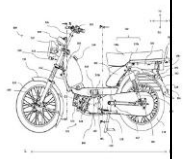
28.	CANISTER MOUNTING	TVS MOTOR COMPANY LIMITED Vaidheeswaran RAMESH; Karnam VENKATA MANGA RAJU; Deepan THANGAVEL; Lavanya VENKATESH and Manickam SUBASH	15/02/2021 BD/P/ 2021/50	IN 202041011125 16/03/2020	B 01D 53/04, F 02M 25/08	The present invention relates to a step through type vehicle (100), where said vehicle (100) comprises of a mono tube type frame (101), engine (125), cylinder head (123), cylinder (124), fuel tank module (103), canister assembly (306). The frame assembly includes a main tube (101b), a down tube (101c). The canister assembly (306) is mounted to the frame with the canister bracket (204) which is detachably attached to the frame bracket (206), further covered by a cover frame (118), thereby, ensures the ease of accessibility and serviceability of the canister assembly (306).	

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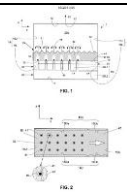
29.	FLUIDIZED BED GRANULATOR OR FLUIDIZED BED/SPOUTED BED GRANULATOR	TOYO ENGINEERING CORPORATION Masashi TAKAHASHI; Keishi SANO; Genshi NISHIKAWA; Kimihito HARUTA; Katsunori YAGOH; Yuichiro WAKASHIMA; Keiji MASE; Shozo ISHIBASHI and Tetsuya KAWABE	17/02/2021 BD/P/ 2021/52	JP 2020-037641 05/03/2020	B OI 2/02, 2/6	Provided is a fluidized bed or fluidized bed/spouted bed granulator in which dust is unlikely to adhere to inner wall surfaces of a granulation chamber. A fluidized bed or fluidized bed/spouted bed granulator into which urea seed particles, an aqueous urea solution and air are introduced to produce urea particles with an average particle size of 1 mm or more,wherein the granulator includes a box-shaped granulation chamber configured of a bottom floor, a top surface and side surfaces, inner wall surfaces of the granulation chamber are formed of a metal plate material, an upper part of the side surfaces or the top surface includes an exhaust outlet, the side surfaces or the top surface includes an inlet for introducing the seed particles of urea, the side surfaces include a collection port for the urea particles, the aqueous urea solution is introduced from the bottom floor or the side surfaces, the air is introduced from the bottom floor or the bottom floor and the side surfaces,at least a portion of the inner wall surfaces of the granulation chamber is treated by surface roughening, an	

						arithmetic average roughness (Ra) (JIS B 0601:1994) of peaks and valleys in the surface treated by surface roughening is 0.35 to 5.0 μm, and an average distance between local peaks (S) (JIS B 0601:1994) of the peaks and valleys is 2 to 300 μm. Selected drawing: none	

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30.	RANDOM ACCESS CHANNEL PERFORMANCE REPORTING IN UNLICENSED NETWORKS	Telefonaktiebolaget LM Ericsson (publ) Marco Belleschi; Pablo Soldati; Icaro L. J. Da Silva; Ali Parichehrehteroujeni; Angelo Centonza and Pradeepa Ramachandra	17/02/2021 BD/P/ 2021/53	US 62/979,515 21/02/2020	H 04W 24/10	A user equipment, UE (105), makes a plurality of attempts at random access to an access node (110). The UE transmits, to the access node (110), a report comprising Listen Before Talk, LBT, diagnostic data for each of the attempts at random access. The access node (110) receives, from the UE (105), the report and configures the UE (105) with an adjusted random access resource allocation based on the LBT diagnostic data of at least one of the attempts at random access.