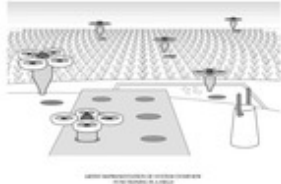
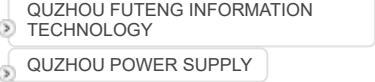
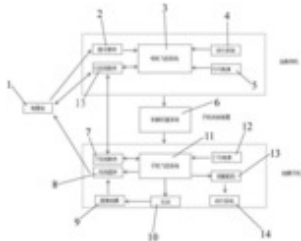
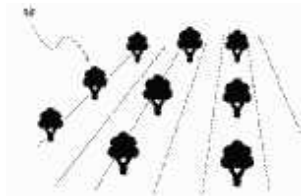


20 results for 4 and seed - Collection: FAMPAT

#	  Title	Publication number	Publ. date	Applicant/Assignee			
1.	Aerial farm robot system for crop dusting, planting, fertilizing and other field jobs	EP2978665	2016-02-03				100 %
Modern farming is currently being done by powerful ground equipment or aircraft that weigh several tons and treat uniformly tens of hectares per hour. Automated farming can use small, agile, lightweight, energy-efficient automated robotic equipment that flies to do the same job, even able to farm on a plant-by-plant basis, allowing for new ways of farming. Automated farming uses unmanned aerial vehicles (UAVs) that are equipped with detachable implements and reservoirs and that we call "aerial farm robots." Automated farming uses high-precision GPS and other precision positioning and vision technology to autonomously and precisely perform crop dusting, planting, fertilizing and other field related farming or husbandry tasks. The subsystems for the control, refill, recharge and communication subsystems of the aerial farm robots are part of the overall automated farming system, and can autonomously handle most of the husbandry tasks on a farm.							
							
2.	Agricultural uav (unmanned aerial vehicle)	CN109588397	2019-04-09				76 %
The invention relates to an agricultural UAV (unmanned aerial vehicle). The agricultural UAV comprises a UAV body, a seed discharging mechanism, a sowing mechanism and a pesticide spraying mechanism, wherein the seed discharging mechanism is mounted at the lower end of the UAV body; the sowing mechanism is located between the seed discharging mechanism and the pesticide spraying mechanism; the seed discharging mechanism comprises a work chamber, a storage tank, a push rack, a rotating round plate, a rotating block, a rotating motor and a seed discharging pipe; the sowing mechanism comprises a rotary motor, a driving bevel gear, driven bevel gears, a fixed rack, an adjusting cylinder, a rotary rack and a sowing rack; the pesticide spraying mechanism comprises a pesticide box, a water pump, pesticide spraying pipes, an adjusting rod, an adjusting plate and an adjusting motor; the sowing rack comprises a connecting ring, rotating plates and a sowing trough; the push rack comprises a pushblock and a push rod. The agricultural UAV can solve the problems that labor cost is high in sowing and pesticide spraying processes, adjusting flexibility is poor when the UAV is applied, sowing quantity is non-adjustable, sowing uniformity is poor and the like.							
							
3.	Novel son and mother unmanned aerial vehicle system	CN106005410	2016-10-12				75 %
The invention relates to a novel son and mother unmanned aerial vehicle system which is composed of a carrying mother plane, a shooting son plane, an airborne winch system and a ground station. The carrying mother plane and the ground station transmit information through an instruction receiver and a wireless data transmission device, the instruction receiver is connected with a mother-plane flight control system, and the wireless data transmission device is connected with the mother-plane flight control system; a mother-plane power system is connected with the mother-plane flight control system, and a mother-plane power supply is connected with the mother-plane flight control system; the carrying mother plane is connected with the shooting son plane through the airborne winch system, one end of the airborne winch system is connected with the carrying mother plane, and the other end of the airborne winch system is connected with a son-plane flight control system; a son-plane wireless data transmission device and a son-plane wireless image transmission device are arranged in the son-plane flight control system which is connected with a cloud deck, an image shooting system is arranged in the cloud deck, the son-plane flight control system is provided with a servo steering engine, electric energy of the son-plane flight control system is provided by a son-plane power supply, and the servo steering engine is connected with a son-plane power system.							
							
4.	Agricultural nesting apparatus and agricultural nesting method	KR10-2019-0011155	2019-02-01				74 %
The present invention relates to an agricultural nesting apparatus and an agricultural nesting method for calculating and providing plant location information capable of maximally planting seeds or a seeding within a limited agricultural or arable land area based on a minimum separation distance necessary for ideal growth of the seeds or the seeding. The agricultural nesting method comprises the steps of: transmitting a moving course; receiving an image from an unmanned aerial vehicle; transmitting the image to a nesting server; receiving a map; transmitting local information; transmitting information of seeds and a seeding; and receiving nesting information.							
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5. [Agricultural nesting apparatus and agricultural nesting method](#)

KR10-2019-0011171

2019-02-01

NURII

74 %

The present invention relates to an agricultural nesting apparatus and an agricultural nesting method for calculating and providing plant location information capable of maximally planting seeds or a seeding within a limited agricultural or arable land area based on a minimum separation distance necessary for ideal growth of the seeds or the seeding. The agricultural nesting method comprises the steps of: transmitting a moving course; receiving an image from an unmanned aerial vehicle; transmitting the image to a nesting server; receiving a map; transmitting local information; transmitting information of seeds and a seeding; and receiving nesting information.

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6. [Unmanned air vehicle for tunnel structure investigation, and system using the same](#)

KR10-1923314

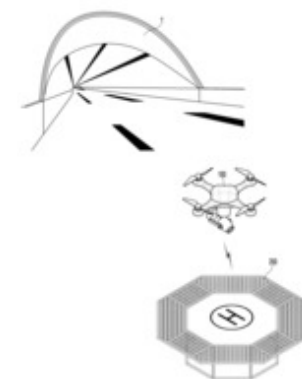
2018-11-28

JUNG, WOONG YEON

72 %

Disclosed is an unmanned air vehicle (UAV) to investigate a tunnel structure, which flies in the tunnel structure and photographs a surface state of the tunnel structure by infrared ray to evaluate a state of the tunnel structure, and a tunnel structure investigation system using the same. According to the present invention, the tunnel structure investigation system comprises: a UAV flying in a tunnel structure to collect image information about a surface state of the tunnel structure; and a tunnel structure investigation device to set a flying path of the UAV based on stored design information of the tunnel structure and to estimate a state of the tunnel structure based on the collected image information. Accordingly, the UAV is used, and thus the state of the tunnel structure is safely and conveniently estimated. Moreover, when the UAV flies in the tunnel structure and photographs the surface state of the tunnel structure, a distance between the UAV and the tunnel structure is continuously measured and a collision therebetween is prevented. Moreover, even if global positioning system (GPS) coordinates are not smoothly received, a current location of the UAV is recorded in the image information generated by photographing the surface state and thus it is possible to identify the position of the tunnel structure corresponding to the image information.

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7. [Method and apparatus for airborne dissemination and implantation of seeds](#)

US20190021236

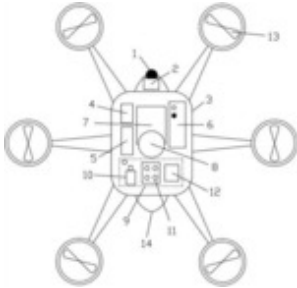
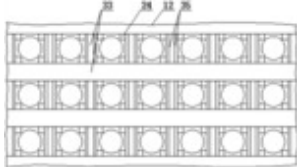
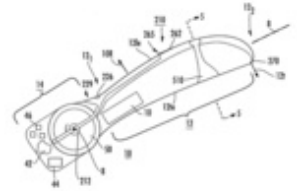
2019-01-24

PATRICK BRETT EVAN

72 %

This invention relates to a method and apparatus for the airborne dissemination and implantation of seeds utilizing an aerodynamic **seed** delivery apparatus with built-in nutrients, anti-pest, and anti-fungal properties that can be disseminated rapidly from an airborne platform. The velocity of impact and depth of penetration into specific soil types by the delivery apparatus can be controlled up to a terminal velocity kinetic energy by exploiting a specified drag coefficient, mass, and altitude of release. The seeds are delivered and imbedded into the soil at the optimal depth and orientation to maximize germination rates, since **seed** orientation has a pronounced effect on germination and sprout mortality rates. Flight paths for Unmanned Aerial Vehicles (UAVs) utilized for dissemination can be automated to adjust coordinates based on wind vectors, terrain elevation data, and soil permeability data to efficiently achieve a desired penetration depth across a specified geographic area.



8.	Unmanned aerial vehicle and method for monitoring coalfield fire area distribution and combustion situation	CN107218970	2017-09-29	CHINA UNIVERSITY OF MINING & TECHNOLOGY XUZHOU ZHONGKUANG DAKUANGSHAN SAFETY TECHNOLOGY & EQUIPMENT RESEARCH & DEVELOPMENT CENTER	72 %	
The invention discloses an unmanned aerial vehicle (UAV) and a method for monitoring coalfield fire area distribution and combustion situation. The UAV is composed of a wireless communication module, a control system, a data storage module, a power supply, an inertial navigation system, a space positioning module and a data monitoring module. The main operation method comprises: the control system of the UAV receives an instruction of a ground host to start flight, the inertial navigation system, the space positioning module and the data monitoring module acquire and synchronize exterior orientation attitude information in real time, and the ground host simulates and fits coalfield fire area geomorphic characteristics by using orientation information and geomorphic image information acquired by the UAV, and integrates infrared thermal imaging information, hybrid index gas proportion indexes (e.g., CO/CO2) and atmospheric temperature and humidity to predict coalfield fire area surface temperature distribution characteristic and corresponding fire combustion situation. The UAV and the method can quickly and safely simulate the geomorphic characteristics and surface temperature field distribution of a large-range coalfield fire area and predict the fire combustion situation.						
9.	An intelligent agricultural planting irrigation system	CN109018359	2018-12-18	ZHANG ZHENHUA	71 %	
An intelligent agricultural planting irrigation system includes an unmanned aerial vehicle, telescopic device, supporting device, splicing device, Isolation device, irrigation equipment, identification device, Wireless Devices and Control Center, An unmanned aerial vehicle device include a planting area, UAV warehouse and protective UAV, A telescopic device include a telescopic channel, telescopicmotor, telescopic strut, telescopic base and floor fixing plate, The support device comprises a support channel, Support hydraulic pump, Support hydraulic lever, supporting frame, A support groove and an unmanned aerial vehicle stop plate, A splice device includes a first splice channel, First splice motor, A protective splice plate and a first splice groove, The isolation device comprises an isolation motor, an isolation telescopic plate, a waterproof isolation layer, a protection channel, a protection motor, an isolation frame and an isolation net; the irrigation device comprises a drainagechannel, an irrigation storage bin, an irrigation sprinkler head and an irrigation pipe; and the identification device comprises a first camera, a second camera, a humidity sensor and an ultrasonic bird driver.						
10.	Active maple seed flyer	US7766274	2010-08-03	LOCKHEED MARTIN	70 %	
An unmanned aerial vehicle (UAV) has a payload or body affixed at one end of an elongated airfoil. The entire airfoil/payload combination rotates about a center of mass to define a rotor disk. Thrust is provided by air-augmented rocket engine thrusting tangentially at a location remote from the payload. A control system maintains knowledge of its environment, as by a camera, to produce directional control signals which actuate lift control means in synchronism with the rotational position of the vehicle. A deployable object may be carried. Protection of the stowed vehicle is provided by blister packaging.						
11.	Unmanned aerial sprinkler, and sprinkling method using same	KR101668981	2016-10-25	KOREA UNMANNED AIRCRAFT SERVICE	69 %	
According to the present invention, an unmanned aerial sprinkler comprises: an unmanned aerial sprinkler main body (100) including a battery (110), a control part (120), a sensor part (130), and a weight detection part (140); a storage part (200) including a storage tank (210), a discharging nozzle (220), and a discharging hole opening and closing member (230); a fertilizer sprinkling part (300) including a horizontal level maintaining plate (310), a moving means (320), a rotation plate driving motor (330), and a rotation plate (340); and a driving part (400). The unmanned aerial sprinkler can sprinkle a fixed amount of fertilizer without being affected by the inclination of an unmanned aircraft while operating. COPYRIGHT KIPO 2016						