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1) Family number: 43154475 (US2009095697A)

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VENTILATED RACK SYSTEM

Abstract: Source: US2009095697A A ventilated cage and rack system for assembly by a user using simple tools and a method for assembly is provided. A plurality of frames and vertical plenums can be connected to a base, and a retaining assembly can be used to connect a plurality of vertical beams and horizontal support beams. A plurality of canopies is preferably used to connect the plenums and the support beams to shroud cages beneath the canopies. The canopies preferably include removable side walls to adapt to the width of the cage being shrouded. A plenum clean out system preferably provides a relatively simple method of draining a cleaning fluid from a plenum by moving a lever between an open and closed position. A pressure based plenum system is also provided wherein a constant air pressure is maintained in the ventilated rack system and air is provided into a cage at a constant air pressure.

Probable Assignee: LAB PRODUCTS INC

Earliest Publication Date: 20090416

2) Family number: 28431930 (US2003056729A)

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AUTOMATED EGG INJECTION MACHINE AND METHOD

Abstract: Source: US2003056729A A pneumatically operated egg injection machine includes a sealed frame structure with a pair of in line parallel tracks through an injection section and a transfer section in series. An injection assembly over one parallel track includes a plurality of injectors gripped in a support plate to simultaneously inject vaccine into the same injection region irrespective of egg height and orientation. Fluid delivery systems meter prescribed vaccine dosages to the injecting needles with reduced turbulence, friction, heat and residence time to increase the delivered titer to the injected eggs. A transfer assembly includes a plurality of transfer suction cups which lift the injected eggs by causing a reduced pressure in a ring around the injection hole while maintaining the injection hole at atmospheric pressure, thus avoiding negative pressure in the egg. Once the eggs are lifted, the plate and suction cups move horizontally across the machine over to the other parallel track to deposit the injected eggs. All of the eggs are injected and transferred as a single group. The injection assembly is sprayed with a sanitizing solution at the same time that the injected eggs are moved from the injection section to the transfer section and the transfer assembly can transfer the eggs from the incubating tray to the hatching tray while the eggs in the next incubating tray are injected by the injecting assembly, thus increasing machine speed. The operation of the machine is controlled and monitored by a controller or computer with appropriate visual display monitor.

Probable Assignee: SANOVO CAPITAL A S

Earliest Publication Date: 20030312

3) Family number: 45026309 (US2011308148A)

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MUSHROOM PRODUCTION PROCESS

Abstract: Source: US2011308148A The present invention relates to a mushroom production process comprising the steps of preparing a mushroom growing shed with at least one bed of mushroom compost; supplying heat to the mushroom growing shed; harvesting the mushrooms; and removing the spent mushroom compost from the mushroom growing shed; wherein the process further comprises the steps of combusting the spent mushroom compost in an energy conversion system; harnessing the heat generated by combusting the spent mushroom compost; and using the harnessed heat to control temperature of the mushroom growing shed. In this way, the energy costs for the mushroom production are greatly reduced.

Probable Assignee: BIOMASS HEATING SOLUTIONS LTD

Earliest Publication Date: 20100527

4) Family number: 49411090 (US2011202186A)

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SYSTEM AND METHOD FOR COOLING AND PROMOTING PHYSICAL ACTIVITY OF POULTRY

Abstract: Source: US2011202186A A sprinkler controller in a poultry house having a processor, a data storage device operatively connected to the processor, the data storage device having instructions for programming the processor, and an input/output module operatively connected to the processor. The input/output module is configured to communicate with at least one valve for controlling a flow of fluid between a fluid source and at least one sprinkler nozzle. The at least one valve has an open position permitting the flow of fluid, and a closed position inhibiting the flow of fluid, and the position of the valve being determined by the processor. The processor is programmed to set the valve in the open position at a start of an activity promotion interval, and to set the valve in the closed position at the end of the activity promotion interval. The duration of the activity promotion interval is selected such that a sufficient amount of fluid is dispersed through the sprinkler nozzle to promote physical activity in the poultry. The start of the activity promotion interval is predetermined based on a frequency of operation parameter indicative of a number of activity promotion intervals in a time period, and a value for the frequency of operation parameter being selected to promote growth of the poultry.

Probable Assignee: WEEDEN ENVIRONMENTS INC

Earliest Publication Date: 20110818

5) Family number: 33149308 (US2006201432A)

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METHOD AND SYSTEM FOR TRACKING AND MANAGING ANIMALS AND/OR FOOD PRODUCTS

Abstract: Source: US2006201432A Embodiments of a method and system are described for tracking and managing animals and/or food products. These embodiments can include entering into a computer system identification data for animals and location data for locations occupied by the animals. This data can be collected, for example, by a data service provider and transmitted to a data trustee. The data trustee may filter the data into official data and non-official data. The official data may be sent to an official database. When a public health issue arises, such as an occurrence of mad cow disease, the government may use an identifier for a diseased animal or a location identifier to request a trace report from the data trustee. The data trustee may then use the official data to provide a report showing, for example, which animals have commingled with the diseased animal. Based on this report, other sick or potentially sick animals can be treated, quarantined, or slaughtered. As another example, the disclosed embodiments may be used to facilitate commercial transactions by providing data that validates, for example, an animal's health and food quality.

Probable Assignee: MWI VETERINARY SUPPLY CO

Earliest Publication Date: 20060727

6) Family number: 67490628 (US2017325431A)

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INSECT PRODUCTION SYSTEMS AND METHODS

Abstract: Source: US2017325431A Variable-scale, modular, easily manufacturable, energy efficient, reliable, and computer operated Insect Production Superstructure Systems (IPSS) may be used to produce insects for human and animal consumption, and for the extraction and use of lipids for applications involving medicine, nanotechnology, consumer products, and chemical production with minimal water, feedstock, and environmental impact. An IPSS may comprise modules including feedstock mixing, enhanced feedstock splitting, insect feeding, insect breeding, insect collection, insect grinding, pathogen removal, multifunctional flour mixing, liquid mixing, shaping, cooking, flavoring, biocatalyst mixing, exoskeleton separation, liquid separation, and lipid extraction. An IPSS may be configured to be constructed out of a plurality of containerized modules.

Probable Assignee: INSECTERGY LLC

Earliest Publication Date: 20171116

7) Family number: 33062279 (US2006178579A)

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DETERMINING RESPIRATORY OR CIRCULATORY HEALTH CONDITION IN ANIMALS FOR IMPROVED MANAGEMENT

Abstract: Source: US2006178579A A method and system for managing at least one animal is disclosed. The method can include imaging, such as ultrasound imaging, a lung of a live animal, such as a ruminant animal or bovine animal. The imaging can be performed to determine a degree of respiratory damage from past respiratory illness. After imaging, information regarding respiratory damage can be used to select at least one aspect of the treatment, care or disposition of the animal. For example, the information can be used to select the amount or type of feed provided to the animal at a feedlot. The information also can be used to select how long the animal should be housed at the feedlot prior to slaughter. If an animal is diagnosed with a respiratory illness, information about its degree of respiratory damage from past respiratory illness also can be used to select the appropriate medical treatment or lack of treatment.

Probable Assignee: MWI VETERINARY SUPPLY CO

Earliest Publication Date: 20060608

8) Family number: 59086078 (US2015118203A)

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DELIVERY SYSTEM AND PROBIOTIC COMPOSITION FOR ANIMALS AND PLANTS

Abstract: Source: US2015118203A Probiotic compositions that comprise one or more bacteria species in spore form, a thickener to form a stabilized suspension and to preferably act as a prebiotic, one or more acids or salts of acids, and optionally a water activity reducer. A system for delivering probiotic compositions by gravity feed or non-contact pump to a point of consumption by a plant or animal, preferably in conjunction with acidified **drinking water**, comprising a collapsible container with attachable tubing that prevent contamination of the probiotic composition within the container. Delivery may be actuated in response to a timer, motion detector, fluid level sensor, RFID tag, or other mechanism to periodically or continuously dispense a dosage of probiotic composition directly to the soil surrounding a plant or to the water or feed for an animal. A method for increasing beneficial bacteria in an animal's GIT comprises adding probiotics to acidified **drinking water**.

Probable Assignee: NCH CORP

Earliest Publication Date: 20150430

SWIFTLETS FARMING FOR PRODUCTION OF EDIBLE BIRD'S NESTS

Abstract: Source: US2008178819A A swiftlet breeding facility, for use in creating and harvesting edible bird's nests. The facility includes sub-systems for injecting live insect and worm prey, and water, into an aerial enclosure to provide a feeding system imitative of a natural swiftlet feeding environment.

Probable Assignee: SIA YIK HEI

Earliest Publication Date: 20071029

APPARATUS FOR PROVIDING FRESH WATER TO FOWL AND METHOD OF MAKING THE SAME

Abstract: Source: US2014239215A This specification discloses an article for providing fresh water to fowl and a method for making the same. The article comprises a valve which is adapted to be attached to a bottle. The valve is adapted to be attached to a bottle by way of a female connection adapter.

Probable Assignee: CHICKEN FOUNTAIN LLC

Earliest Publication Date: 20140828

AQUATIC FARMING SYSTEMS

Abstract: Source: US2009050067A A system related to inland farming of seafood products within an environmentally-controlled seafood-farming environment. The seafood-farming environment is preferably established within at least one substantially buried space. The associated apparatus preferably comprises at least one nutrient supplier to supply adequate nutrients to at least one aqueous medium supporting the farming of the seafood, and at least one waste remover to remove unwanted waste from the aqueous medium. Surface crops are grown above and around the seafood-farming environment to maximize production within the farming site. A kit and methods of implementation are also discussed.

Probable Assignee: DRP AND LAP ENTERPRISES LLC

Earliest Publication Date: 20090226

AUTOMATICALLY FLUSHING WATER REGULATOR FOR ANIMAL WATERING SYSTEMS

Abstract: Source: US2006096640A A water pressure regulator for a watering system of an animal house is provided with a water inlet member comprising a watering path and a flush path. The watering path is operably engaged by the regulating valve. The inlet member is manually movable relative to the housing, to position the watering path outlet relative to the regulating valve to prevent the regulating valve from engaging the inlet member, thereby placing the regulator in a flush mode. The flush path has a water exit into the regulator spaced from the watering path port, and hence is not engagable by the regulating valve. A flush valve is provided in the flush path, and is moveable between a closed position in which the regulator will operate in a drinking mode and an open position in which the regulator will be in a flush mode. An actuator is provided which is operated by a control system to allow for automatic flushing of the watering line according to a predetermined schedule. Hence, the regulator can be switched between an operating mode and a flushing mode either manually or automatically. The control system can also control the lighting system and water supplement system for the animal house; and the control of the watering system can be tied to the lighting and medicating systems.

Probable Assignee: GSI GROUP INC

Earliest Publication Date: 20060511

USE OF ALUM TO INHIBIT AMMONIA VOLATILIZATION AND TO DECREASE PHOSPHORUS SOLUBILITY IN POULTRY LITTER

Abstract: Source: US5622697A A method for treating poultry litter which inhibits ammonia volatilization and reduces soluble phosphorus levels in the litter. The method comprises the addition of alum to litter in an amount sufficient to maintain the litter pH at values low enough to inhibit ammonia volatilization. The addition of alum, iron or calcium compounds to litter also effectively precipitates soluble phosphorus in litter, thereby reducing the amount of soluble phosphorus runoff from fields receiving litter.

Probable Assignee: GENERAL CHEMICAL PERFORMANCE PRODUCTS LLC

Earliest Publication Date: 19970422

OZONIZED WATER PRODUCING APPARATUS, GAS/LIQUID MIXING STRUCTURE FOR USE IN THE OZONIZED WATER PRODUCING APPARATUS, OZONIZED WATER PRODUCING METHOD AND OZONIZED WATER

Abstract: Source: US2009026143A To provide an ozonized water producing apparatus capable of efficiently and easily producing ozonized water with a high dissolution degree and a high concentration. In an ozonized water producing apparatus constituted by including a pipeline for passing water to be treated through, a gas-liquid mixing structure provided halfway in the pipeline, and an ozone supply structure for supplying ozone into the gas-liquid mixing structure, the gas-liquid mixing structure is provided with a magnet for exerting a magnetic force onto an inside. By causing the magnetic force to act on both the water to be treated and ozone, ozonized water with a high dissolution degree and a high concentration can be efficiently and easily produced.

Probable Assignee: NATURE S CO LTD

Earliest Publication Date: 20060824

15) Family number: 30163711 (US5283072A)

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MODIFIED AND SIMULATED LIQUID POULTRY EGG PRODUCTS AND METHODS OF MAKING THE SAME

Abstract: Source: US5283072A A blended yolk composition is disclosed comprised of a fat, an emulsifier and an aqueous component, at least one of the fat and the aqueous component containing a chicken-type flavoring. The yolk composition can be used in baking or combined with egg white, a modified egg white or a simulated egg white to produce a simulated blended whole poultry egg composition. Alternatively the yolk composition may utilize a modified yolk, such as decholesterolized yolk. Also disclosed are methods of preparing the compositions.

Probable Assignee: NATIONAL PASTEURIZED EGGS INC

Earliest Publication Date: 19930304

16) Family number: 30464474 (US2001023847A)

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METHOD AND APPARATUS FOR ANAEROBICALLY DEGRADING POLLUTANTS WITH ALKANES

Abstract: Source: US2001023847A A method and apparatus are disclosed in which alkanes such as butane are used to degrade pollutants such as tetrachloroethylene (PCE) and carbon tetrachloride (CT) at contaminated sites. In a preferred embodiment, pollutant concentrations are reduced by injecting a butane substrate into a contaminated area to stimulate the growth of anaerobic butane-utilizing bacteria which degrade the pollutants. In addition to the anaerobic treatment, the area may optionally be treated aerobically by switching from anaerobic to aerobic conditions.

Probable Assignee: GLOBAL BIOSCIENCES INC

Earliest Publication Date: 19980625

17) Family number: 22553328 (US3132664A)

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AUTOMATIC VALVES AND POULTRY WATERERS EMBODYING THE SAME

Abstract: Source: GB1048568A 1,048,568. Valves. FOX PRODUCTS CO. Sept. 30, 1963 [Oct. 1, 1962], No. 38395/63. Heading F2V. [Also in Division A1] The supply valve 1 of a poultry waterer comprises a body 5 mounted on an end wall 32 of the receptacle 30 and having a valve seat 8. A valve member 9 is carried by an operating lever 2 pivoted to the body. One end of the lever to which a suspension chain 42 is attached, extends close to the end wall 32 so that bending moments on this end wall are reduced and no reinforcement is required. A spring 4 biases the lever in the valve-opening direction. As shown, the trough-shaped lever 2 has a bottom opening in which is disposed a flat arm 16 carrying the valve member which is surrounded by an antisplash nozzle 26. The spring is adjustably anchored at 21, 22. A bridge 27 fixed to the top of the lever carries a screw 29 whereby the valve may be locked in closed position. In another embodiment, Figs. 8 and 11 (not shown), the valve member 75 is carried on a resilient arm 66 integral with the lever. A catch 78 pivoted on a bracket 53 is engageable in a notch 79 of the lever to lock the valve closed and normally is retained under the head of the adjustable spring anchorage nut 72. A strainer 93 is fitted in the inlet.

Probable Assignee: SELLER GLOBE CORP

Earliest Publication Date: 19640512

18) Family number: 17332941 (US4196699A)

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POULTRY DRINKER

Abstract: Source: US4196699A A poultry drinker for suspension or for standing on the ground comprises a trough member, a suspendible hanging member from which the trough member is suspended, a resilient connection between the trough member and the hanging member, a valve controlling water supply to the trough in dependence on the amount of water in the trough, and a stand member which can be used to support the stand on the ground, the stand member having a base projecting below the trough member and support means at its upper end for supporting the hanging member when the drinking trough is standing on the ground, the stand member being coupled to the trough member by a coupling which permits limited relative vertical movement so that when the drinking trough is suspended from above, the stand member is suspended from the trough member but when standing on the ground, the trough member may move relative to the stand member in order to operate the valve.

Probable Assignee: BROILER EQUIPMENT CO LTD

Earliest Publication Date: 19790112

19) Family number: 30514807 (US2004079040A)

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SELF-CLEANING FLOORING SYSTEM

Abstract: Source: US2004079040A A self-cleaning flooring system for catching waste products has at least one module comprising a drain pan and a floor grid. The drain pan has a ramp and a central drain outlet. The ramp extends around the drain pan defining a drain pan periphery. The ramp slopes downward from the drain pan periphery towards the drain outlet. The drain pan periphery has a plurality of discharge ports spaced therealong for discharge of flushing fluid onto the ramp such that the waste products are washed down the ramp towards the drain outlet. The floor grid extends across the drain pan and is mounted upon the drain pan periphery for supporting personnel standing thereon while permitting waste products to pass therethrough. The module is interconnectable to horizontally adjacent modules to form the flooring system,

Probable Assignee: SANI FLOOR INC

Earliest Publication Date: 20040429

20) Family number: 17379303 (US3965864A)

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AUTOMATIC DEVICE FOR THE MAINTENANCE OF SMALL ANIMALS

Abstract: Source: US3965864A An automatic device for a rational management of animals, in particular of small animals, which essentially consists of a combination of an automatic feeder, a specially shaped **watering valve** and an automatic dung remover with the adequate cages.

Probable Assignee: BEHRINGWERKE AG

Earliest Publication Date: 19730617

21) Family number: 22184239 (US2915086A)

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VALVES

Abstract: Source: US2915086A (Claim 1) 1. In a double acting **poultry watering valve** of the type described, the combination of valve body means providing an upper valve chamber and a lower valve chamber; means separating said chambers and provided with a valve seat for each chamber, said means including a centrally disposed bore to allow flow of water through said chambers; a movable valve assembly including an elongated upper valve member positioned concentrically within said upper valve chamber, a lower valve member positioned in said lower valve chamber, and means extending through said bore and interconnecting said upper and lower valve members for simultaneous movement, said means allowing space for flow of water through said bore; a pivoted operating lever engaging said lower valve member and arranged to move said member upwardly toward its valve seat when said lever is pivoted in one direction, so simultaneously moving said upper valve member upwardly away from its valve seat, and resilient means connected to said lever to bias the same in a direction opposite to said one direction, said upper valve member having a transverse cross-sectional area such that the effective clearance between the same and the walls of said upper valve chamber is on the order of .005-.020 inch, whereby, when said upper valve member is above its valve seat and water is supplied to the upper valve chamber at normal operating pressures, there is established a marked frictional force tending to move said upper valve member toward its seat.

Probable Assignee: SELLER GLOBE CORP

Earliest Publication Date: 19591201

22) Family number: 55067559 (US2014262166A)

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WASTE HEAT RECOVERY APPARATUS FOR A LIVESTOCK POULTRY BARN

Abstract: Source: US2014262166A Systems and method are provided for recovering heat from waste air being expelled from a livestock poultry barn. A heat recovery unit is specially designed to take advantage of an unused heat source, while avoiding the corrosive effects of waste air from the livestock poultry barn. The novel heat recovery capture heat from the expelled waste air.

Probable Assignee: CURATORS OF UNIV OF MISSOURI

Earliest Publication Date: 20131030

23) Family number: 67366846 (US2017311612A)

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INSECT PRODUCTION SYSTEMS AND METHODS

Abstract: Source: US2017311612A Variable-scale, modular, easily manufacturable, energy efficient, reliable, and computer operated Insect Production Superstructure Systems (IPSS) may be used to produce insects for human and animal consumption, and for the extraction and use of lipids for applications involving medicine, nanotechnology, consumer products, and chemical production with minimal water, feedstock, and environmental impact. An IPSS may comprise modules including feedstock mixing, enhanced feedstock splitting, insect feeding, insect breeding, insect collection, insect grinding, pathogen removal, multifunctional flour mixing, liquid mixing, shaping, cooking, flavoring, biocatalyst mixing, exoskeleton separation, liquid separation, and lipid extraction. An IPSS may be configured to be constructed out of a plurality of containerized modules.

Probable Assignee: INSECTERGY LLC

Earliest Publication Date: 20171102

24) Family number: 24046017 (US4733971A)

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PROGRAMMABLE WEIGHT SENSITIVE MICROINGREDIENT FEED ADDITIVE DELIVERY SYSTEM AND METHOD

Abstract: Source: US4733971A A method and apparatus whereby livestock and poultry are administered feed additives in their feed ration. In one disclosed form, the apparatus stores additive concentrates separately until just prior to use, then on demand dispenses the additive concentrates separately and sequentially into a weigh hopper for sequential, cumulative weighing therein. The weighed contents of the weigh hopper are deposited into a liquid carrier within a mixing vessel where the dispensed additives are diluted, suspended, and dispersed by mixing. The resulting carrier-and-additive slurry is pumped to a receiving station for mixing with a feed ration. The weigh hopper is isolated from movements that would affect additive weight determinations during the weighing process so that accurate measurements of the additive weights are obtained. A computerized control system controls the operation and sequencing of the apparatus. In another disclosed form, the apparatus dispenses additive concentrates by weight directly into a mixing vessel by measuring the loss-of-weight of their respective storage containers. In still another disclosed form, the apparatus dispenses some additive concentrates by weight and others by volume into a mixing vessel.

Probable Assignee: MICRO BEEF TECHNOLOGIES LTD

Earliest Publication Date: 19880329

25) Family number: 21546954 (US2671464A)

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AUTOMATIC WATERER AND MEDICATOR

Abstract: Source: US2671464A (Claim 1) 1. An automatic waterer and medicator, comprising in combination, a tank adapted to controllably feed water into a drinking vessel, float-controlled mechanism for discharging water under pressure into said tank and for stopping said discharge at intervals determined by the fall and rise of the water level in the tank, and further mechanism controlled by said float-controlled mechanism for automatically delivering a measured amount of medicament into the water in the tank at a time in the rise of the water level in the tank, the water discharged into the tank being provided from a supply line under pressure, and said further mechanism including a movable member operated by back-pressure from the discharge of water into the tank.

Probable Assignee: MABBS CARL E

Earliest Publication Date: 19540309

26) Family number: 56266756 (WO14062121A1)

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ANIMAL WATERING DEVICE

Abstract: An animal watering device (2) comprising a trough (4) for holding water is provided. The device comprises a water conduit system (6) in fluid communication with the trough (4) and arranged to be connected to a **water supply** (8), a water outlet (16) arranged at a bottom portion (18) of the trough (4), and an outlet valve arrangement (20) associated with the water outlet (16). The outlet valve arrangement (20) comprises a valve body (22) and a hydraulic cylinder (21) connected to the valve body (22). The water conduit system (6) is connected to the hydraulic cylinder (21) of the outlet valve arrangement (20).

Probable Assignee: DELAVAL HOLDING AB

Earliest Publication Date: 20140424

27) Family number: 33473280 (US2006225438A)

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CHILLER WITH IMPROVED PRODUCT DISTRIBUTION

Abstract: Source: US2006225438A The chiller includes a semi-cylindrical tank (36) that conforms to the perimeter of its auger (38) so that the water can be raised to a water level (68) high above the auger shaft (44). Streams of water (84) are directed from the pulling side (80) across the lower portion of the tank beneath the auger shaft (44) to the dead side 82 of the tank at intervals along the tank so as to disperse the lower portion of the masses (23) of buoyant birds (22) from the more crowded pulling side (80) of the tank, beneath the auger shaft (44) toward the more vacant dead side (82) of the tank, thereby distributing the products more evenly throughout the tank and causing more water turbulence in the tank, thereby increasing the rate of heat transfer from the birds and avoiding having the birds cross over the auger shaft moving backward in chiller into a following flight of the auger.

Probable Assignee: MORRIS AND ASSOCIATES INC

Earliest Publication Date: 20061012

28) Family number: 1003618 (US3661122A)

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WATERING SYSTEM FOR FOWL

Abstract: Source: US3661122A The invention disclosed is an improved low-cost system for watering fowl which maintains without overflow a supply of water at one or more drinking stations, with means for stopping the supply of water at each station individually. A new and simplified supply valve at each station which eliminates the usual causes of valve failure is also a feature of the system disclosed. By utilizing feed troughs as the framework for the system, the invention requires no duplicating supporting structure.

Probable Assignee: DORIS D WILLAUER

Earliest Publication Date: 19710202

29) Family number: 12221710 (US5799609A)

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ANIMAL WATERER

Abstract: Source: US5799609A A device is disclosed which comprises a drinking fountain for animals in the configuration of a free falling stream of water, or continuous waterfall. A pump moves water from a reservoir upward to a discharge ramp, or ramps, where water spills over into a receptacle. The reservoir and receptacle may consist of the same part. The cascade of water takes advantage of a preference demonstrated by animals for moving **drinking water**. The waterfall action also aerates the water and increases freshness, by breaking the surface tension of the standing water and drawing in oxygen from the atmosphere. Filtration of the circulating water in this self-contained system is easily accomplished.

Probable Assignee: RADIO SYSTEM CORP

Earliest Publication Date: 19980901

30) Family number: 60455803 (WO15149917A1)

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LINE DRINKER FOR **SUPPLYING WATER** TO ANIMALS

Abstract: The invention relates to a line drinker (10) for **supplying water** to animals, in particular small animals such as poultry, having a **water-supply** line (11) and having a ventilation element (14) that has a valve (18) and a valve body (31). A cap (19) in which the valve body is freely movable is associated with the valve. The cap has an upper ventilation opening (27) that can be closed by the valve body and a lower inlet opening (28). The cap has an inner chamber (30), the length of which between the ventilation opening and the inlet opening is larger than the valve body.

Probable Assignee: LUBING MASCHF LUDWIG

Earliest Publication Date: 20151001

31) Family number: 22635750 (US3034481A)

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POULTRY WATERER

Abstract: Source: US3034481A (Claim 1) 1. In a **poultry waterer**, the combination of a water- ing trough; a filling valve mounted ;on said -troi,-h al_d constructed and arranged to **supply water** thereto in accordance with the amount of water in the trough, said valve includin.- a pivoted 4operating member and resieent means biasing said operating member toward a valve-closin-, position; supply conduit means connected to said valve to **supply water** thereto, said conduit means permittin.- vert_cal movement of said valve; and means for suspendin.- thecon,-bination of said -trough and valve, said last-mentioned means comprisin.- a first support member attached to said pivoted operatin,- member and a second support member attached to said trough at a point spaced longitudinally from said valve, the weight of said trough tending to move said operating member in opposition to said r-silient means when the combination of said valve and said trough is suspended from said support members.

Probable Assignee: SHELLER GLOBE CORP

Earliest Publication Date: 19620515

32) Family number: 21504467 (GB1098995A)

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A VALVE FOR REGULATING THE AMOUNT OF WATER IN A WATERING DEVICE FOR DOMESTIC ANIMALS

Abstract: Source: GB1098995A 1,098,995. Livestock drinking appliances. H. LOHMANN [trading as -LOHMANN APPARATEBAU KOMM.-GES May 19, 1965 [Nov. 7, 1964], No. 21125/65. Heading A1M. [Also in Division F2] The supply of **drinking water** for domestic animals e.g. poultry, is controlled by a pair of closure members 5, 10, the stems 8, 9 of which abut. The valve outlet nozzle 14 opens directly to an annular container. A lever 1 is pivoted to the valve body and its shorter arm contacts the closure 5 whilst the longer arm is loaded by an adjustable spring 2 and has a number of notches 20 from any one of which the container is suspended, depending upon the required responsiveness of the valve. When the container is full the closure 5 is seated and remains so until the container has been emptied of the desired amount of water. Upon removing the container the lever abuts a stop 13 so opening the closure 5 and seating closure 10.

Probable Assignee: LOHMANN APPBAU K G

Earliest Publication Date: 19650916

33) Family number: 18160530 (US5054432A)

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FOWL DRINKER

Abstract: Source: US5054432A A fowl drinker, having a water intake device, characterized in that the water flow adjustment means is not the same as the means with which the valve body is attached to the support column, but is formed by a stem (31) freely inserted in a tubular widened diameter portion (32) of the cup-shaped cover (29) and connected at the top and the bottom thereof, respectively, to a resilient stopper (30) engaging the spout (24) of the valve body (18) water outlet and a blind nut (33) screwed on the widened portion (32) and with which the adjustment is made, without a subsequent dismantling and reassembly of the drinker altering it, the valve body (18) being snugly fitted over the support column (15) to prevent the weight of the **water supply** conduit from upsetting it, affecting said regulation. The support (39) of the bushing (44) which is connected to the pipeline t comprises a flexible strip (17) surrounding said pipeline.

Probable Assignee: TIGSA

Earliest Publication Date: 19900416

34) Family number: 20829715 (GB937984A)

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POULTRY WATERERS

Abstract: Source: GB937984A 937,984. Poultry drinking appliances. FOX PRODUCTS CO. April 24, 1962, No. 15568/62. Class 5(2). [Also in Group XXIX] A **poultry waterer** comprises a watering trough 1 on which is mounted a filling valve 15 connected to a supply pipe 39 which allows vertical movement of the mounted valve, this valve including a pivoted operating member 4 spring-biased in a valveopening direction, the device being suspended from a first support member 5 attached to the pivoted operating member and a second support member 6 attached to the trough at a point spaced horizontally from the valve, so that the combined weight of the trough and water closes the valve in opposition to the spring 3. As shown, the valve comprises two gravity loaded valve members 20, 22 connected together through a seat opening 18 and co-operating with respective seats on opposite sides of this opening. The lower valve member 22 controls the normal supply in response to the weight of water in the trough whilst the upper valve member 20 acts as a safety or cut-off valve which closes under the fluid pressure if the weight of the waterer is removed. The spring loading is adjustable manually by a knob 32 carrying a pinion 33 on a racked portion 34 of the operating member 4 to move the spring anchorage.

Probable Assignee: FOX PROD CO

Earliest Publication Date: 19630925

35) Family number: 11733064 (US4910024A)

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METHOD AND APPARATUS FOR ADMINISTERING LIVE BACTERIA AS FEED ADDITIVES TO LIVESTOCK AND POULTRY

Abstract: Source: US4910024A A method and apparatus for preparing at a livestock feedlot a concentrated suspension of anaerobic bacteria at a known, accurate concentration and for storing the prepared suspension for prolonged periods at the feedlot in a ready-to-use condition without significant loss of viability, allowing feedlot operators to conveniently administer such bacterial supplements to large numbers of livestock as a probiotic on a regular basis in accurate dosages. The apparatus comprises an insulated liquid-holding vessel cooled by a refrigeration means, and mixing and recirculation means to ensure temperature and concentration homogeneity of the bacterial suspension. The vessel and contents are gravimetrically monitored to ensure accuracy of bacterial concentration. In each of several embodiments, at time of intended use, a preselected mass or volume of bacterial liquid suspension is dispensed on demand from the vessel into a separate mixing tank for further accurate dilution and for addition of other microingredients to the suspension, as required, immediately before adding to and mixing with a known mass or volume of animal feed. The apparatus can be used with or without a separate microingredient weighing or volumetric metering system.

Probable Assignee: MICRO CHEMICAL INC

Earliest Publication Date: 19900320

36) Family number: 2935894 (US4820527A)

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METHOD OF FEEDING RUMINANTS

Abstract: Source: US4820527A Ruminants with a fully developed rumen function are fed by a method in which the total feed is divided into two parts comprising (a) a liquid feed containing high-energy components, which feed is supplied while stimulating the ruminant to close its oesophageal groove, and (b) a solid feed containing low-energy components, which feed is supplied in such a way that the ruminant does not close its oesophageal groove, both types of feed being independently available through separate dispensing systems. One or more of the components of the liquid feed may be partially or completely hydrolyzed. A liquid feed dispensing device (an embodiment of which is shown in Fig. 1) comprises a container, metering means and outlet means for liquid feed; the outlet means (such as a teat) are located in an enclosure for ruminants at a level substantially above the level of the shoulders of the ruminants housed in the enclosure.

Probable Assignee: DAMINO A S

Earliest Publication Date: 19850606

37) Family number: 22643202 (FR1235257A)

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VANNE D'ALIMENTATION EN EAU POUR ABREUVOIRS VALVE WATER SUPPLY FOR DRINKERS (MACHINE TRANSLATION)

Abstract: Source: FR1235257A (Claim 1) 1 Vanne d'alimentation en eau pour abreuvoirs, comportant un boisseau auquel le conduit d'alimentation en eau est raccorde, un element obturateur monte dans ce boisseau et presentant une queue ou tige faisant saillie a travers un embout prevu a l'extremite du boisseau, un flasque monte de facon reglable sur une colonnette, un trou menage dans ce flasque pour la reception de l'embout, un levier en forme de gouttiere monte a pivotement sur le flasque par une extremite, un ressort deplacant ce levier dans un sens l'appliquant contre la queue ou tige, des organes reliant l'extremite d un receptacle a eau au levier, et un conduit d'adduction prevu sur le levier et transferant au receptacle l'eau qui traverse la vanne.

Machine translation: (Claim 1) a valve for water troughs, with a ball which led to the **water supply** is connected, a shutter element mounted in the ball and presenting a tail or rod protruding through a mouthpiece provided at the end of the plug, a flange adjustably mounted on a post, a hole formed in said flange for reception of the endpiece, a gutter-shaped lever pivotally mounted on one end by the flange, a spring moving this lever in a direction applying against the tail or stem, connecting the end bodies of water has a receptacle to the lever, and a supply conduit provided on the lever and transferring to the receptacle the water flowing through the valve.

Earliest Publication Date: 19600701

38) Family number: 22773569 (US3047004A)

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PROPORTIONER AND MIXER, AND TUMBLING DIFFERENTIAL FOR CONTROLLING THE ACTION THEREOF

Abstract: Source: US3047004A (Claim 1) 1. A liquid proportioning and mixing device comprising a first receptacle for containing a liquid supply, a second receptacle adapted to receive a liquid vehicle, a liquid inlet means and a liquid outlet means for the second receptacle, said second receptacle being air-tight means for controlling flow of liquid through said inlet means and said outlet means such that introduction of liquid vehicle into the second receptacle through said inlet means creates a high atmospheric pressure therein and withdrawal of liquid vehicle through said outlet means creates subatmospheric pressure therein and means operating alternately under the influence of said pressures respectively to extract a measured quantity of liquid from the first receptacle and transfer the said measured quantity of liquid into the second receptacle.

Probable Assignee: STERRETT VANCE C

Earliest Publication Date: 19620731

39) Family number: 22883365 (US2790417A)

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CONSTANT WATER LEVEL POULTRY FOUNTAIN

Abstract: Source: US2790417A (Claim 1) 1. An automatic poultry fountain comprising a cylindrical housing adapted to be connected to a source of water supply under pressure, an upper end wall carried by said housing, said upper end wall having a central opening therein, a tapered tip extending upwardly from said end wall communicating with said central opening, a valve plug for closing the lower end of said central opening loose in said housing and disposed adjacent said end wall, a stem fixed to said valve plug loosely extending upwardly through said tip, a receptacle slidably mounted on said housing, a dome mounted on said receptacle overlying said tip, a valve adjustably mounted on said dome for engagement with the upper end of said tip, a spring constantly urging said dome and said second valve upwardly to open said tip, said stem normally engaging said second valve plug and holding said first valve plug in its open position, closing of said receptacle to a predetermined degree effecting contact of said second valve plug with said tip, said first valve plug upon removal of said receptacle from said housing moving upwardly to closed position against said end wall by water pressure in said housing.

Probable Assignee: BREMBECK HOWARD S

Earliest Publication Date: 19570430

40) Family number: 2984564 (US4829933A)

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DEVICE FOR SUPPLYING SMALL LIVESTOCK WITH DRINKING WATER

Abstract: Source: US4829933A A water trough for emergent chicks and maturing chickens includes a float operated actuator for a drinking nozzle which can be manually activated to provide water in a drinking trough for emergent chicks, and which can be manually disabled on maturing of the chickens to force the maturing chickens to drink from the drinking nozzle.

Probable Assignee: FARMTEC BV

Earliest Publication Date: 19870506

41) Family number: 1127180 (US3870076A)

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AUTOMATIC LIQUID MEDICAMENT MIXER FOR TREATING ANIMALS

Abstract: Source: US3870076A A device for accurately proportioning and mixing a liquid medicament or the like into drinking water for animals includes a reservoir in which the medicament and water are mixed, a water inlet supply capable of being adjusted to a desired predetermined flow rate, and a pumping arrangement for continuously injecting a predetermined flow rate of medicament into the reservoir container. A control device is arranged for initiating the water and medicament flow automatically as the demand for drinking water exists. A pre-set timing device is incorporated in the medicament flow circuit to permit cyclic feeding of the medicament to the water, if required. An elapsed time indicator in the water circuit permits calculation of the total quantity of water used.

Probable Assignee: DACMONT INC

Earliest Publication Date: 19750311

42) Family number: 861491 (US3437075A)

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METHOD AND APPARATUS FOR ADMINISTERING FEED ADDITIVES TO LIVESTOCK AND POULTRY

Abstract: Source: US3437075A ABSTRACT OF THE DISCLOSURE
A method and apparatus whereby livestock and poultry are administered feed additives in their drinking water or feed ration. The apparatus stores additive concentrates separately until just prior to use, then on demand measures and dispenses the additive concentrates separately but simultaneously into a flow of water or other fluent carrier. The carrier flows continuously to an additive receiving station, which may be a pressure tank or drinking water trough if the carrier is drinking water, or which may be a feed mill if the carrier is water, molasses or other fluent, consumptive carrier material. This application is a continuation-in-part of prior copending application Ser. No. 472,207, now abandoned filed July 15, 1965, and entitled "Method and Apparatus for Feeding Livestock and Poultry." FIELD OF THE INVENTION

Probable Assignee: ROLAND J HAWES JR

Earliest Publication Date: 19690408

43) Family number: 19902448 (GB378565A)

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IMPROVED APPLIANCE FOR AUTOMATICALLY SUPPLYING WATER TO DRINKING VESSELS FOR POULTRY AND FOR SIMILAR PURPOSES

Abstract: Source: GB378565A 15330/31 and 833/32. [Class 5 (ii).] An appliance for maintaining a supply of water for poultry or the like, comprises a siphon feed device having a stationary tube and a movable tube both being adapted to be partly immersed in a **water supply** vessel, the movable tube affording communication between said **water supply** vessel and a drinking trough, whereby on raising the movable tube above the water level in the stationary tube the flow of water ceases and on again releasing said tube its quick return re-establishes the flow. The siphon, which supplies the drinking trough B with water from a reservoir A comprises a sheath C, open at its upper end and provided at its lower end with a small inlet D. Inside the sheath C slides a tube or plunger E open at its lower end and partly closed at its upper end by a U-tube F, part of the space between the tubes E and F being filled with lead or other metal G. An extension H of the sheath C comprises a notch J to support the tube F in its raised position. In a modification, Fig. 2, the inlet of the tube F is flared at K to engage the side of the sheath C, the tube E and filling G being omitted. The siphon is secured to a bracket L supporting the trough B. The rate of supply to the reservoir which may be in the form of a tank T, is controlled by a float valve comprising a float W operating a lever U with an elastic valve seat N <1> pivoted on an antislash shield S on an inlet nozzle R: the shield S is locked in position by a pin 1 engaging apertures in the vessel T, the pin being adjustable. A series of troughs B may be supplied from a reservoir Q by means of a supply vessel T and service pipe X, siphons of the form shown in Fig. 2 being screwed into the latter to supply each trough individually.

Probable Assignee: BEN STANSFIELD

Earliest Publication Date: 19320818

44) Family number: 1560388 (US4337728A)

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PROGRAMMED HOG FEEDER AND PROCESS

Abstract: Source: US4337728A A method of feeding hogs is disclosed. The method includes the steps of providing all the hogs with all the feed they care to consume for a limited feeding period of time, and thereafter denying all feed to all the hogs for a limited feedless period of time. Preferably, weaner hogs are provided with all the feed they care to consume during three separated, limited feeding periods of approximately two hours each per day. These feeding periods are alternated with three feedless periods during which all feed is denied to all the small hogs. This feeding regime is maintained until the hogs weigh approximately 100 pounds. Thereafter, two limited feeding periods are provided each day until the hogs reach market weight. In this way, hog weight gain per day is maximized and the amount of feed consumed per pound of hog weight gained is minimized. Apparatus for carrying out this feeding method is also disclosed. The apparatus includes a feed pan or trough, a high capacity feed delivery conveyor, and a timed feed shut-off means interposed between the feed trough means and the feed delivery conveyor for alternatively delivering and preventing delivery of feed to the feed trough. If desired, a **water nozzle** can be located above the feed trough to deliver water to the hogs during a feeding period. A timed water shut-off means can be interposed between the **water nozzle** and the water delivery pipe for alternately permitting and preventing delivery of water to the **water nozzle**.

Probable Assignee: CTB INC

Earliest Publication Date: 19800801

45) Family number: 734266 (GB1256510A)

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SUPPLYING FEED CONCENTRATES TO ANIMALS.

Abstract: Source: GB1256510A [Also in divisions B1, B2 and B8] In a method of administering food additive concentrates to livestock, quantities of different additives are separately stored and measured amounts thereof are fed to a fluent carrier which is supplied to a receiving station. The trough 16, Fig. 1 is supplied with water from a main conduit 10 through a float controlled valve 18. A branch conduit 22 supplies the mixing tank 24 through a float operated control valve 25 and the water in the tank 24 is pumped into an enclosed pressure tank 32 the outlet 34 of which is connected to the main conduit 10. A group of six additive storage bins 50a-50f having cover and filtering screens 97 are located above the tank 24 and a dispensing rod 64, Fig. 3, is located immediately below their outlets 63. A vibrating motor 96, Fig. 1, is mounted on the bin supporting frame. The rod 64, Fig. 3 has a series of radial blind bore holes which contain adjustable screws and which cooperate with the bin outlets to receive additives and as the rod is rotated by a variable speed motor 78, Fig. 1, the additives are discharged into the mixing tank. When the water level in the trough 16 falls sufficiently for the float operated valve 18 to open, the pressure in tank 32 drops and detector switch 38 is closed to actuate the pump motors 14, 30, the dispensing rod motor 78 and the vibrator motor 96. The rod 64 dispenses the metered quantities of additives into the water in the mixing tank which feeds into the tank 32 which in turn feeds into the main line 10 until the level in trough 16 again closes float operated valve 18. In another embodiment, Fig. 9 (not shown) the main **water supply** line leads directly to the mixing tank which can be supplied from a turbulence producing nozzle. The blind bore holes in the metering rod are arranged in adjacent rows and comprise different numbers so that by axial movement of the rod to select the operative row the supply to the metering tank can be varied. The rod is locked in the selected axial position by a screw and groove detent mechanism. The metering bore holes are frusto-conical and are emptied by brushes. To prevent overfeeding of additives when the pressure in the pressure tank is too high or too low because of failure of the master switch or fall in supply pressure corresponding safety switches operate to open the circuit of the metering rod driving motor. In another embodiment, Fig. 15, there are two storage bins 200, 202 having independently operable metering rods and two liquid additive tanks 204, 206 the emptying of each of which is controlled by selectively operable pumps two inlet lines 252, 253 and two discharge lines 260, 261 are provided. The control circuit includes switches for the selective operation of the various motors for the pumps and metering rod. A warning light 316 indicates that the apparatus is in operation and a blinker switch 322 operated by a float 318 is in circuit with the light 316 and is operated when the level in the mixing tank 236 reaches a predetermined high level. The float 318 also effects stopping of the pump and metering rod motors and actuation of solenoid operated valves in the supply. A high pressure detector in the discharge main 270 operates a switch in the main power supply to shut-down the apparatus. The outlet line 270 may lead to further feeding means, e.g. means for feeding molasses.

Earliest Publication Date: 19711208

46) Family number: 11881816 (US5408954A)

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DRINKER FOR CHICKEN

Abstract: Source: US5408954A A drinker for chicken has a base, an outer case, a spring casing, a pull rod which is a match for the clearance of the spring casing, and a lever. The pull rod is connected to the combined part of a guideway ringlike valve at an end, and with the spring casing, forms two ringlike clearances within the case. A guide, a washer for the valve and an opening in the base form a clearance, which allows a jet-like spray of water to enter the case. The difference in the sectional areas between the clearances slows the velocity of the water. The time and the volume of **water supply** can be controlled by adjusting the stroke of the pull rod. By means of a back and forth movement of the guide and the pull rod, creating a jet-like spray, scale (mineral deposits) or any other contamination can be removed from the valve nozzle and the interior of the case. The result is a drinker which has no leakage nor any blockage because of scale build-up, and which is simple in structure and low in cost.

Probable Assignee: YANBIN REN

Earliest Publication Date: 19950425

47) Family number: 34535375 (US2007125307A)

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PRECISION WATERING METHOD AND APPARATUS

Abstract: Source: US2007125307A A method and apparatus for accurately dispensing, monitoring, quantifying, and controlling liquids provided to one or more animals are disclosed. In some embodiments, a standalone apparatus having a local user interface is coupled to a liquid source and drinking assembly to monitor, quantify, and control the liquid consumption of one or more specific animals. In other embodiments, multiple standalone apparatuses are each coupled to a liquid source and a respective drinking assembly to monitor, quantify, and control the liquid consumed through the respective drinking assembly. In this scenario, each of the standalone apparatuses shares one or more common remote user interface panels. In yet another embodiment, standalone apparatuses are networked to other standalone apparatuses. User workstations and central control panels resident on the watering apparatus network, or a third-party network interfaced to the network, allow liquid consumption to be monitored, controlled, and quantified both locally and remotely.

Probable Assignee: LIFE SCIENCE CONTROL CO

Earliest Publication Date: 20070607

48) Family number: 8535623 (US4323036A)

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AUTOMATIC WATERING APPARATUS

Abstract: Source: US4323036A An automatic watering apparatus for poultry and the like, the apparatus comprising a central post, a sleeve reciprocally but non-rotatably mounted on the post, a valve assembly mounted on the post, a supply tube extending from the valve assembly and in communication with a water source, the sleeve and the valve assembly being engageable to operate the valve assembly, and a bell member rotatably fixed to the sleeve and having a channel for collection of water discharged from the valve assembly.

Probable Assignee: SALERNO MICHAEL

Earliest Publication Date: 19820406

49) Family number: 8186494 (GB2118014A)

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DRINKING TROUGH

Abstract: Source: GB2118014A A drinking trough for poultry comprises a cap 2 of the shape of a truncated cone, open at its upper end in order to give passage to a hollow rod 3 to which is affixed a base or seating 1 of which the ends are shaped to form separate trough compartments 5 which can communicate via orifices 8 with a cavity 7 provided on the said base. The water is supplied via a valve 16 and a float 18 inside the drinking trough. The trough compartment 5 can be caused to communicate with adjacent vats via tube 10 which are used for young poultry and which are supplied with water at a constant level. Furthermore, the trough compartment 5 can be provided with little gutters or be replaced by vats suitable for different types of poultry.

Probable Assignee: LEROY ERNEST

Earliest Publication Date: 19820416

50) Family number: 6560213 (SU950252T)

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APPARATUS FOR MONITORING HATCHER HUMIDIFYING APPARATUS VALVE DAMAGE

Abstract: Source: SU950252T 1 Invention relates to agriculturally ystvu particularly to humidity control devices in incubators. A device for controlling the valve seal failure, comprising the locking element associated with a valve seat and associated with the unit 1 detects changes in electrical resistance. disadvantage of the known device is the lack of automation control valve malfunction. The closest technical nature of the invention is an apparatus vklyuchayustsee power source and a control unit connected to the valve mounted on the electromagnetic coil interacting with the valve plug, the needle is in contact with the inlet valve seat, and the output of the valve seat in contact with the nozzle needle under which set the receiving hopper 2. disadvantage of this device is the lack of automation control valve malfunction. object of the invention - Automation of the control valve malfunction. The goal is achieved in that the device is provided with a contact needle, RC-chain shaper and a single E level signal, the three inverters conjunctors three two input disjunctors, counter indicator and the pulse generator, the output control unit is connected to the first conjunctor first input via a first inverter, a first input of a second conjunctor, and through a single signal generator - with setting input of the counter, the output signal level shaper connected to the second input of the second conjunctor and through the second torus inver395 - a second input conjunctor first outputs of the first and second through kononktorov disjunctors and third inverter connected to the first input of the third x conjunctor, soedinemnogo second input to the pulse generator, the output is connected to the third conjunctor counting input of the meter connected to the output of the indicator and input of the signal level is connected to the RC-chain connected to the power supply and the needle of the contacts established between the fitting and the valve inlet funnel of Fig. 1 is a functional diagram for ustroystva5 Fig. 2 valve humidifier incubator; Fig. 3 timing diagram. The apparatus includes a power supply-1, control unit 2 is connected to valve 3 mounted on the electromagnetic coil 4, interacting with the piston 5, the needle 6 which is contacted with the first valve seat 7, the output jack contacts the nozzle needle 8, 9, which is installed at the receiving funnel 10, the needle track 11, RC-chain having a resistor 12 and capacitor 13, conditioners H level signal 15 single Nala, the first 16, second 17 and third 18 inverters, the first 1E, second 20 and third 21 situation with two entrances, disjunctors -22, the counter 23, pulses 2f Hener torus 25 and the indicator, wherein the output control unit 2 cos nected to the first input of the first konyun rt ora 19 through the first inverter 16 to a first input of a second conjunctor 20 and through a single signal generator 15 - with adjusting input of a counter 23, the output signal level Tt shaper connected to the second input of the second conjunctor 20 and through the second inverter 17 to a second input of the first conjunctor 19, first outlet 19 and second 20 conjunctors disjunctors 22 and through a third inverter 18 connected to the first input of the third conjunctor 21, a second input connected nennogo generator 24 pulses output of the third conjunctor 21 is connected to the input of a counter 23 is connected to the output indicator 25 and the input of the signal level of 1 is connected to the RC-chain having a resistor 12 and capacitor 13 is connected to a power source 1 needle and pin 11 installed between the valve fitting 9 3 The device operates as follows: In the initial position (no team humidification) plunger 5 is in the lower position and slot 6 7zakryto needle plunger 5 and the water does not pass. If, applying the control unit 2 team humidification incorporated electromag netic coil and plunger 5 C goes to the upper position, the needle plunger 6 7 slot opens and water through it and fitting 9 extends into the receiving hopper 10. Regulated water flow - 9 fitting with needle 8. Upon rotation of fitting 9-clockwise to the needle rises up, reducing the orifice seat 7., At the opposite rotation of the orifice increases. Drops of water flowing from the nozzle 9, zhayut discharge capacitor 13 which is charged in the pauses between the drops of water to the power supply voltage through a resistor 12. Shaper Work Tt is characterized by having a signal level threshold: signal (Fig. B), and the output signal of driver 14, the signals a and c inversion taken from the outputs of the first 16 and second 17 inverters, and the signal control unit 2. When the command control unit 2 on hydration with intact valve at the outlet of the first 19 to conjunctor is a signal unit. If no commands and operable valve 3 at Vits signal output unit 20 of the second conjunctor. These signals are applied to inputs 22 and disjunctors inverted by the third inverter 21 (signal M). As a result, with intact valve generator 2C 3 pulses (signals) are passed through the third conjunctor 21 only during the transition process (signal 6) Readout 23 (signal g) are zeroed at the beginning and end of the next instruction (signal) received from control unit 2 Merez shaper 15 single signal input of the counter 23 installation capacity counter 23 is equal to the product of the pulse repetition frequency generator 2C maximum time on the transition process in the device. In case of mode 3 Pan stem beyond the range of its normal operation occurs tightening gizanie transition to a constant phase shift signal shaper 1 level. This leads to an increase of the number of pulses with cheniyy generator 2k, extending through conjunctor 21 and causes the counter 23 overflows, the indicator 2 is fixed MTO brazom Thus, the apparatus provides automatic control valve malfunction.Claims apparatus for monitoring valve malfunction humidifier incubator, includes a power source and a control unit connected to the solenoid valve installed at tion coil interacting with a valve plunger, the needle is contacted with the input concentration valve seat and an output valve seat contacts the nozzle needle, under which is mounted on the receiving hopper, about l and t h e Forgiving her and the fact that, for the purpose of avtomatizatsii.kontrol fault, it is provided with a needle pin, RC-chain formers E layer and a single signal, three inverters, three conjunctors two WMO September 2 yes disjunctors, counter indicator and the pulse generator, the output control unit is connected to a first input of the first conjunctor via a first inverter - a first input of a second conjunctor, a single generator via a signal with setting input of the counter, the output signal level shaper connected a second input of the second conjunctor and via a second inverter - a second input kokyunktora first outputs of the first and second through conjunctors dizyunktor.i third inverter connected to the first input of the third conjunctor, a second input coupled to the pulse generator output is connected to the third conjunctor counting input of the counter connected to the output of the indicator and input of the signal level is connected to the RC-chain connected to the power supply and the needle of the contacts established between the choke valve and the inlet funnel. Sources of information, p rin tyie into account in the examination of one "USSR Inventor's Certificate number 99336, cl. A 01 K i | 1/0i, 1976. 2. Slavin P.M. etc. Solenoid valve for **water supply** to the humidifier: incubator, poultry mechanization and electrification, M., Colossus, p. 10, 1971 (prototype), / Z1 / o of F SH niffi LH 7 Fig. 3 Lh tr - «vc f « c «a and : D. 1 NW NW « -Th - AL-4i-and y.g V and tj It.ctj 5 bo 4g

Probable Assignee: RYAZANSKIY RADIOTEKHNICHESKIY

Earliest Publication Date: 19820815

51) Family number: 21761488 (US2754838A)

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DRINKING FOUNTAIN FOR POULTRY

Abstract: Source: US2754838A (Claim 1) 1. In a drinking fountain for poultry, the combination of an outer bowl having bottom and peripheral walls, a central vertical **water supply** pipe extending through and connected v/ith the bottom wall of the bowl, a nozzle at the upper end of the pipe having a central oiiice for the upward discharge of water, an inner shell Within the bowl having a bottom wall apertured to receive the said pipe and having a peripheral wall spaced inwardly from the peripheral wall of the bowl to provide a narrow annular space surrounding the shell, the said shell being adapted to float in water contained in the bowl and having provision near the top of its peripheral Wall for the inward flow of water into the shell from the said annular space, a tube connected with the bottom wall of the shell and surrounding the said pipe and the nozzle which tube has slots therein near the top thereof and communicating with the interior of the shell, the said tube having a diameter such that a narrow annular channel is provided within the tube and around the nozzle and pipe which channel communicates at its lower end with the interior of the bowl, and a closure connected with the lube near the top thereof and engagcable with the nozzle to support the shell and to close the nozzle oriice when the shell is in its lowermost position which closure upon upward movement of the shell is separated from the nozzle so as to permit water to be discharged from the nozzle orifice and to flow outwardly through the said tube slots and into the shell and downwardly through the said annular channel and into the bowl, the Water flowing into the shell causing it to be partly filled and the water flowing into the bowl causing the partly filled shell to float until water in the said annular space flows inwardly into the bowl near the top thereof so as to cause the shell to sink and thereby engage the closure with the nozzle.

Probable Assignee: SMITH GATES CORP

Earliest Publication Date: 19560717
52) Family number: 4184656 (US4947796A)

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DOG FEEDER APPARATUS

Abstract: Source: US4947796A A dog feeder apparatus is set forth wherein a plurality of tanks and associated trays are included within the apparatus wherein a water tank provides fluid to a forwardly oriented bowl assembly wherein a dog feeder apparatus accordingly provides a dry-type dog food to a forwardly oriented second bowl apparatus wherein an intercommunicating manually reciprocable valve enables fluid from the water bowl to enter a perimeter through about the dry dog food bowl to effect moisturizing of the dry dog food.

Probable Assignee: ROBINETTE JOSEPH F

Earliest Publication Date: 19900814

53) Family number: 30287545 (WO04012501A1)

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PRESSURE REGULATING DEVICE FOR HYDRAULIC SYSTEMS

Abstract: Described herein is a device for regulating the pressure in hydraulic systems in which there is at least one nozzle (50) for determining the section of passage of the water in the device and in which there are provided switching means for moving the tap (20) between at least one enabling position, in which the flow of water passes only through the calibrated hole of the nozzle, and at least one disabling position, in which the water flows also through bypass passages made on the outer surface of the nozzle.

Probable Assignee: CORTI ZOOTECHNICI S R L

Earliest Publication Date: 20040130

54) Family number: 19732354 (US1673814A)

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POULTRY DRINKING FOUNTAIN

Abstract: Source: US1673814A 1. A poultry drinking fountain including :L platform having an opening therein, ri supporting brzmcket, a tilting trough pivoted to the bracket, ri Water discharge nozzle can ried by the bracket and éli` 1` 2,11g€(l to be engaged by the trough and to lilnit the swinging motion thereof in one direction, and means controlling the flow of Water to said nozzle.

Probable Assignee: EDINGTON ROBERT M

Earliest Publication Date: 19280619

55) Family number: 21669324 (US2509004A)

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POULTRY DRINKING FOUNTAIN

Abstract: Source: US2509004A (Claim 1) 1. A poultry drinking fountain comprising a ftunnel including a bowl shaped body having an aiin-Lilar upper edge and a tapered exterior surface and a restricted neck, the latter adapted to be inserted in a drain pipe having a vertical portion providing an ul)per edge, a number of sets of concentric annular segmental ribs on the exterior of the funnel body, one set of which Is adapted to engage the iipper edge of the drain pipe, said body having a number of notches in its upper edge, a drinking cup, radial arms projecting from said cup and having terminal ends in a plane above the upper edge of said cup and resting in the notches, a nozzle pipe projected thi-oi-igh a hole in the funnel body with its inner end extending to approximately the center of said cup.. a nozzle on the inner end of the nozzle pipe, a guard resting on the upper edge of the funnel body and overlying the terminal ends of the cup arms to assist in holdin- them in place, and means to temporarily fas'ten the guard on the funnel body.

Probable Assignee: LIPMAN WILLIAM L

Earliest Publication Date: 19500523

56) Family number: 67660891 (WO17202875A1)

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DEVICE, LIQUID RESERVOIR, SYSTEM AND USE OF A LIQUID RESERVOIR FOR THE CURRENTLESS SPRINKLING OF ANIMAL FEED

Abstract: The present invention relates to a device (10) for the currentless sprinkling of animal feed. The device (10) has a housing (20), a holder (90) for a liquid reservoir (30) with a mechanically actuatable spray head (40), and a transmission element (50). The transmission element (50) is mounted movably in the housing (20) and is designed to be moved by a conveyor system (3). The transmission element (50) has a section (54) which actuates the spray head (40) and is designed to transmit a movement of the transmission element (50) to the spray head (40). The invention also relates to a liquid reservoir (30), a system (1) and use of the liquid reservoir (30).

Probable Assignee: EW NUTRITION GMBH

Earliest Publication Date: 20171130

57) Family number: 16978802 (DE29816073U1)

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DOSING EQUIPMENT FOR THE ADAPTATION OF THE WATER THROUGHPUT OF AN ANIMAL WATERING PLACE VALVE

Abstract: Source: DE29816073U1 (Claim 1) 1. Dosiereinrichtung zum Anpassen des Wasserdurchsatzes eines mit einer Wasserversorgung zu verbindenden Tiertraenkeventils, das ein von einem Tier zu betätigendes Auf-Zu-Ventil aufweist, wobei die Dosiereinrichtung zwei relativ zueinander verstellbare Dosierteile aufweist, von denen das eine mit mehreren separaten Wasser-Durchlauföffnungen mit unterschiedlich grossen Durchlaufquerschnitten und das andere mit einem diese einzeln freigebenden Ventildichtglied ausgebildet ist, wobei ferner die verstellbaren Dosierteile mehrere definierte Relativstellungen zueinander aufweisen, deren Anzahl der Anzahl der Durchlauföffnungen entspricht, und wobei das Ventildichtglied in den definierten Relativstellungen der verstellbaren Dosierteile jeweils eine der Durchlauföffnungen freigibt und alle anderen Durchlauföffnungen verschliesst, dadurch gekennzeichnet, dass die definierten Relativstellungen der verstellbaren Dosierteile (10,12) bestimmten unterschiedlichen Wasserdrukken der Wasserversorgung eindeutig zugeordnet sowie mit entsprechenden, von aussen sichtbaren Markierungen ausgebildet sind und dass die Durchlaufquerschnitte der Durchlauföffnungen (22) so bemessen sind, dass in allen definierten Relativstellungen der verstellbaren Dosierteile (10,12) der für eine bestimmte Tiergattung und/oder Tiergrösse angepasste gleiche Wasserdurchsatz vorliegt, wenn der jeweils anstehende Wasserdruk der Wasserversorgung mit der diesem zugeordneten Relativstellung der verstellbaren Dosierteile (10,12) übereinstimmt.

Machine translation: (Claim 1) 1 Metering device for adjusting the water flow one with a **water supply** to be connected Tiertraenkeventils, which has received from one animal to be operated on-off Ventil I, with the dosing two relatively adjustable dosing hurry, one of which one large continuous cross sections with several separate water Durchlauföffnungen with different and the other is formed with a them individually releasing valve sealing member, further wherein the adjustable dosing haste more defined positions relative to one another, equal to the number of Durchlauföffnungen corresponds, and wherein the valve sealing member in den definierten relative positions of the adjustable dosing rush releasing one of Durchlauföffnungen and closes all other Durchlauföffnungen, wherein the defined relative positions of the adjustable dosing haste (10.12) determines different Wasserdrukken the **water supply** clearly assigned and are appropriate, visible from the outside marking Trained and that the passage cross-sections of the Durchlauföffnungen (22) so bemessen sind that in all defined relative positions of the adjustable dosing hurry (10,12) of a particular animal species for and / or adapted Tiergrösse same water flow is present when each of the resulting water pressure of the **water supply** of this assigned relative position of the adjustable dosing haste (10.12) coincides.

Probable Assignee: NEHER HANS GMBH AND CO KG

Earliest Publication Date: 19990114

58) Family number: 20978876 (US1894563A)

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SANITARY AUTOMATIC POULTRY FOUNTAIN

Abstract: Source: US1894563A 1. A drinking fountain comprising in combination an overflow trough, a drinking bowl disposed above said trough, a supply valve connected with said drinking bowl, and including a core provided with a stem, an operating bar operatively engaged with said stem, a member provided with a clamp engaging the wall of said overflow trough, said member and said operating bar provided with cooperating means for limiting movement of said bar when the latter is actuated for moving the valve core to a valve opening or closing position, said means including a stop adjustable on said bar, and engageable with said member, and a second stop on said member remote from the first mentioned stop and to be engaged by said bar when the first mentioned stop is moved out of engagement with said member.

Probable Assignee: JONES FRANK E

Earliest Publication Date: 19330117

59) Family number: 19306114 (GB669164A)

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IMPROVEMENTS IN OR RELATING TO POULTRY BATTERIES

Abstract: Source: GB669164A [Dec. 9, 1949] No. 31731/49. Class 5(ii). Poultry batteries comprising rows of cages separated by a gangway are provided with troughs for food and water which are moved along the gangway to supply opposite cages in succession. Tiers of troughs 46, 47 are secured to uprights 44, 45 supported on wheels 22, 23 which are moved along rails 24, 25, 26 by an electric motor in the overhead housing 28, movement being transmitted through reduction gearing and a chain 27. Current is supplied to the motor by a flexible cable 31. Switches 42 reverse the direction of movement at the ends of the battery. The water-troughs are fitted with level regulating ball or like valves 52 and supplied through a rubber pipe 54 wound on to and paid out from a reel 57. A similar reel is provided for the electric cable 31. The food troughs contain compartments for grain, mash and grit. Beneath each row of cages is a droppings tray 17, cleaned by multiple scrapers 77 on spindles 75 passing through brackets 72 beneath the food troughs. The scrapers are arranged in echelon and the lower trays protrude farther so that the droppings fall in steps into the bin or pit 78. Spray nozzles 65 discharge from the water pipe 54 on to the trays 17. The scrapers may be allowed to trail ineffectively in one direction of movement, or may be lifted automatically through arms 81 and spindles 82. The housing 28 also encloses a motor for driving a ventilator 29.

Probable Assignee: FREDERICK DOUGLAS HILL

Earliest Publication Date: 19520326

60) Family number: 21378169 (US2224211A)

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POULTRY DRINKING FOUNTAIN

Abstract: Source: US2224211A 1. A drinking fountain for prising a water tank, means for maintaining a constant water level in said tank. and a beveled-end nozzle connected to said tank and disposed with its longitudinal axis in substantially the same plane as the level of Water in said tank and providing an end opening which extends below said level and is of such dimensions as to hold the water by surface tension against gravity.

Probable Assignee: AUSTIN JOHN J

Earliest Publication Date: 19401210

61) Family number: 21527610 (US2239393A)

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POULTRY DRINKING FOUNTAIN

Abstract: Source: US2239393A 1. A poultry drinking fountain comprising a funnel including a flared body and 8. diminished neck, the latter adapted to be inserted in a standpipe, a number of hoinocentric annular enlargements on the exterior of the funnel body providing shoulders, one of which will engage the upper edge of the standpipe into which the funnel neck is projected, an adapter mounted upon said neck for engagement with the interior oi the standpipe, a plurality of lugs on the interior of the funnel but below the rim thereof and having channels in their top surfaces, a bowl, radial arms projecting from said bowl resting on said lugs, a clamp element formed with the funnel body, a water pipe resting in said clamp element and a notch in the upper edge of the bowl, said pipe projecting approximately to the center of said bowl, a removable clamp element, fastening devices to attach the removable clamp element to the first mentioned one and thereby secure the water pipe in place, an upturned I.-fitting on the inner end of said water pipe, a nipple carried by said L-fitting, a saucer having a pressed-up apertured central portion fitting over the nipple and a nozzle screwed on said nipple to hold the saucer in place.

Probable Assignee: LIPMAN WILLIAM L

Earliest Publication Date: 19410422

62) Family number: 22887047 (US2963035A)

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FLUID TREATING APPARATUS

Abstract: Source: US2963035A (Claim 1) 1. Fluid treating apparatus comprising a dispensing container having an inlet line and an outlet, a constant flow rate valve located in said inlet line, a treating agent fluid line connected to said inlet line adjacent the point where the inlet line joins said container, electrically driven constant volume pump means in said treating agent line and pressure-responsive electrical switch means on said inlet line operated upon attaining desired pressure range conditions within said line in pressure communication with said container, said switch means controlling said pump means.

Probable Assignee: NAT CORDIS

Earliest Publication Date: 19601206

63) Family number: 28436723 (US2003064677A)

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LIVESTOCK COOLING SYSTEM

Abstract: Source: US2003064677A A livestock cooling system creates an environment for protecting the health and productivity of animals, particularly dairy cows. One or more cooling fans are connected to programmable oscillation means, enabling the herds man to program fan oscillation according to the location of the livestock. Water is injected under high pressure into the air stream of the fans to create a fog. The system is also programmable according to various environmental conditions, including temperature, humidity, and wind velocity. The pressure and volume of the injected water are programmable and may be adjusted by the controller according to the observed environmental conditions. The disclosed system provides a cool and healthy environment for livestock, where the environment is programmed to track the animals according to the time of day and the location of shade.

Probable Assignee: KOOLSYNK LLC

Earliest Publication Date: 20030403

64) Family number: 4242285 (US4433642A)

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DRINKING TROUGH FOR POULTRY

Abstract: Source: US4433642A The invention relates to improvements to water distribution devices used in intensive poultry raising facilities. The new drinking trough has a cover (2) in the shape of a truncated cone, open at its upper end to allow a hollow rod (3) to pass, which rod attached a base or plate (1) whose ends are shaped as troughs (5) which can communicate by orifices (8) with a cavity (7) provided on said base. The supply of water is controlled by valve (16) and float (18) inside the drinking trough. The trough (5) can be put in communication with adjacent reservoirs for young poultry supplied at a constant level. Further, the trough (5) can receive small gutters or be replaced by reservoirs suited for various types of poultry, especially very young poultry.

Probable Assignee: LE ROY ERNEST

Earliest Publication Date: 19840228

65) Family number: 4486198 (US4470374A)

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METHOD AND APPARATUS FOR EXTENDING THE EGG PRODUCTION CYCLE AND FOR HARDENING EGG SHELLS

Abstract: Source: US4470374A A method and apparatus for feeding egg laying hens carbonated water on demand to modify the normal egg laying cycle of hens by increasing substantially the length of the continuous egg laying period and to increase the hardness of the egg shells and reduce losses due to egg breakage.

Probable Assignee: UPPERMAN JOHN W

Earliest Publication Date: 19840911

66) Family number: 7139245 (US4125121A)

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CLEANING TOOL FOR POULTRY WATERING SYSTEMS

Abstract: Source: US4125121A The **water supply** line to an automatic **poultry watering** system is disconnected from the metering housing, and a flushing implement is attached to the free end of the supply line. The flushing implement includes an upper end attachable to the supply line approximately equal in diameter to the supply line and a relatively small nozzle member at the other or free end which is considerably reduced in both outer and inner diameter. The flow of water is thus greatly accelerated, and the implement is used to probe the inlet and into the metering housing to flush out any debris or loose material that may become lodged therein clogging up the operation of the metering housing or valve.

Probable Assignee: TIDY JR MIAL R

Earliest Publication Date: 19781114

67) Family number: 12490294 (US6110455A)

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METHOD FOR ENCOURAGING POULTRY TO DISTRIBUTE AND INGEST COMPETITIVE EXCLUSION PRODUCTS

Abstract: Source: US6110455A A method is disclosed for increasing the rate at which young poultry will ingest beneficial probiotic compositions effective against bacteria such as salmonella. The method includes the steps of maintaining a flat containing a plurality of chicks at a first position under an ambient light intensity for a period sufficient for the chicks to acclimate to the ambient light intensity, transferring the flat and the chicks therein to a second position where the light intensity to which the chicks are being exposed is at a predetermined higher intensity than the ambient intensity, distributing a competitive exclusion product onto the flat of chicks while the flat and chicks therein are being exposed to the higher intensity light, immediately thereafter transferring the flat and the chicks therein to a third position where the chicks are exposed to an intermediate light intensity that is greater than the ambient intensity but less than the predetermined high intensity, and maintaining the flat and the chicks therein in the third position and exposed to the intermediate light intensity for a period substantially equivalent to the effective lifetime of the competitive exclusion product.

Probable Assignee: MS BIOSCIENCE

Earliest Publication Date: 20000829

68) Family number: 20405015 (GB847027A)

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IMPROVEMENTS IN WATERING ARRANGEMENTS FOR POULTRY

Abstract: Source: GB847027A 847,027. Poultry drinking appliances. CRAVEN, E. COUNTESS OF, and CRAVEN, W. R. B. EARL OF, [trading as CRAVEN ESTATES]. May 13, 1959 [May 13, 1958], No. 15363/58. Class 5(2). A watering device for poultry comprises a trough 1 pivotally supported by members 5 and provided with a water inlet 8 and a drain outlet 4. A gradually sloping weir 12 is provided at one end of the trough. **Water supplied** at regular intervals from a syphon tank 10 flows into the trough and carries any food particles or dirt over the weir and into the drain pipe 15. A wire 13 over the trough 1 prevents the birds from perching on the trough and the wire is attached to a member 5 to support the end of the trough.

Probable Assignee: ELIZABETH CRAVEN COUNTESS OF C

Earliest Publication Date: 19600907

69) Family number: 22615581 (US3013401A)

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AIR FOG COOLING SYSTEM

Abstract: Source: US3013401A (Claim 1) 1. Apparatus for cooling an enclosure and the animals therein, comprising: a fan positioned to circulate air in the enclosure; thermoresponsive means located within the enclosure and subject to the temperature therein; spray means for injecting a fine spray of water into the enclosure and on the animals therein; and a timer mechanism operatively associated with said spray means for causing said spray means to be operated and subsequently shut off previous to the stopping of the operation of said fan said spray means and timer mechanism being dominated by said thermo-responsive means.

Probable Assignee: AUTOMATIC POULTRY FEEDER COMPA

Earliest Publication Date: 19611219

70) Family number: 3636145 (FR2379247A)

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DISTRIBUTEUR AUTOMATIQUE DE LIQUIDE POUR LA JEUNE VOLAILLE AUTOMATIC WATERING DEVICE FOR YOUNG POULTRY - HAS CONSTANT WATER LEVEL REGULATOR AT LEVEL OF TROUGH WHICH IS SUPPORTED ABOVE GROUND BY HEAVY SOCKETED BASE

Abstract: Source: FR2379247A Perfectionnements apportés à l'abreuvoir pour volailles selon le brevet principal, comprenant notamment un élément à parois coniques avec, à sa base, une aujette ou rigole alimentée en continu par de l'eau. L'élément conique, dont la calotte peut être lestée par un matériau convenable, est maintenu en surelevation par rapport au sol au moyen d'une monture assujettie à une assise pour un bac régulateur à niveau d'eau constant, ladite assise étant reliée à un socle stabilisateur fixe au sol ou reposant sur celui-ci. Selon une autre variante, les abreuvoirs peuvent être posés sur un grillage constituant la partie supérieure d'un récipient de collecte d'excès d'eau et des salissures, pratiquement enfoui dans le sol. Application à la distribution automatique d'eau pour tous types de volailles (dont moyennes et grosses volailles dans les installations d'élevage intensif. The watering device has conical walls (3) which are outwardly turned at the base to form a trough (5). It is supported above ground level by a heavy socketed base (24) which receives a mounting (25). The base of the mounting serves as a seating for a constant water level regulator (27). The regulator is installed at the same level as the trough and is connected by flexible pipes to the **water supply** and to the trough at (7). The regulator contains a float operated valve (28). The base may be of concrete and is of 10 to 20 Kg weight to avoid upsetting of the device by simultaneous arrival of a number of birds.

Probable Assignee: LE ROY ERNEST

Earliest Publication Date: 19780901

71) Family number: 3295748 (US4892061A)

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DRINKING SYSTEM FOR POULTRY, SMALL ANIMALS AND THE LIKE

Abstract: Source: US4892061A A drinking mechanism which includes a trough, the trough having a generally upwardly opening mouth when in an in-use position, brackets for suspending the trough from a support structure in the in-use position, the trough being movable by the rotation of the brackets to a non-use position at which the mouth is no longer in the generally upwardly opening position but instead opens generally downwardly, and the bracket also holding the trough in its non-use position thereby preventing the interior of the trough from becoming filled with debris when associated with poultry or similar small animals. Preferably, the drinking mechanism is suspended by the brackets from a conventional watering system which includes a water pipe and a plurality of drinkers having nipples which can be actuated by the beaks of birds or similar animals. Through this combination, chicks having tender beaks which have just been de-beaked can drink from the trough and as the beaks heal and the chicks grow the trough can then be pivoted to its non-use position and the chicks or birds can then drink from the individual drinkers in a conventional fashion.

Probable Assignee: VAL PRODUCTS INC

Earliest Publication Date: 19900109

72) Family number: 59662705 (CN204426315U)

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WATER SUPPLY SYSTEM APPLICABLE TO MULTILAYER CULTURE FRAME FOR POULTRY

Abstract: Source: CN204426315U The utility model discloses a **water supply** system applicable to a multilayer culture frame for poultry, and belongs to the field of poultry culture. The **water supply** system comprises a culture device and a **water supply** device, and is characterized in that the culture device comprising an installing block, a culture cage, a separation plate and an excrement groove, wherein the culture cage is arranged on the installing block, in addition, food storage grooves are arranged on the culture cage, the separation plate is arranged between the installing block and the culture cage, the **water supply** device is arranged on the culture device and consists of a fixing rod, a water storage tank, a water inlet pipe and water outlet pipes, a water outlet valve is arranged on the water storage tank, and is connected with the water inlet pipe through a water inlet branch pipe, the water inlet pipe is arranged on the culture cage and is connected with the water outlet valve through a water conveying pipe, and a spray nozzle is arranged on the water outlet pipe. The **water supply** system has the advantages that the food storage grooves and the water outlet pipes in one-to-one correspondence are arranged on the culture cage, in addition, the plurality of spray nozzles are arranged on the water outlet pipe, the water in the water storage tank can be conveyed into the food storage grooves through the spray nozzles, the work intensity of operators is reduced, and the work efficiency is improved.

Probable Assignee: ZHU GUANGSHUANG

Earliest Publication Date: 20150701

73) Family number: 1534609 (US4182273A)

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FEEDING APPARATUS

Abstract: Source: US4182273A An apparatus for supplying feed material to animals and poultry. The apparatus has a trough located below a hopper used to store dry feed material. A plurality of legs support the hopper on the trough. A tubular member for carrying liquid, as water, extends through the hopper and is joined to an outwardly directed lateral tubular extension. The tubular member and extension is used to dispense the liquid into the trough. A drive motor rotates the tubular member to distribute the liquid around the trough and discharge the dry feed material into the trough. A control having a sensor located in the trough is operable in response to the amount of feed material in the trough to control the supply of water to the tubular member and the motor that rotates the tubular member.

Probable Assignee: PETERSON MAURICE L

Earliest Publication Date: 19800108

74) Family number: 59105892 (CN104542356A)

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WATER SUPPLY SYSTEM SUITABLE FOR MULTI-TIER POULTRY BREEDING RACK

Abstract: Source: CN104542356A The invention discloses a **water supply** system suitable for a multi-tier poultry breeding rack and belongs to the field of poultry breeding. The **water supply** system comprises a breeding unit and a **water supply** unit. The **water supply** system is characterized in that the breeding device comprises mounting blocks, breeding cages, partitions and a dung tray; the breeding cages are disposed on the mounting blocks; feed storage troughs are arranged on the breeding cages; the partitions are disposed between the mounting blocks and the breeding cages; the **water supply** unit is disposed on the breeding unit and comprises fixing bars, water tanks, a water incoming pipe and water outgoing pipes; each water tank is provided with an outflow valve and connected with the water incoming pipe through incoming branch pipes; the water outgoing pipes are disposed on the breeding cages and connected with outflow valves through water pipes; each water outgoing pipe is provided with a nozzle. The feed storage troughs and the water outgoing pipes in one-to-one correspondence are arranged on the breeding cages, the water outgoing pipes are provided with the nozzles, the water in the water tanks can be delivered to the feed storage troughs through the nozzles, labor intensity is reduced for operators, and work efficiency is improved.

Probable Assignee: ZHU GUANGSHUANG

Earliest Publication Date: 20150429

75) Family number: 21724587 (US2446695A)

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AUTOMATIC POULTRY FOUNTAIN

Abstract: Source: US2446695A 1. A drinking fountain comprising, a shallow plastic bowl, a central water inlet to said bowl, a nozzle on said inlet and terminating above the rim of said bowl, peripherally spaced overflow grooves in said rim, a supporting casing for said bowl, and an annular plastic sealing ring secured to said supporting casing and overlying the said rim.

Probable Assignee: STANLEY DIDGET ADNA

Earliest Publication Date: 19480810

76) Family number: 49228979 (US2011168105A)

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PORTABLE LIVESTOCK COOLING SYSTEM

Abstract: Source: US2011168105A A system for generating evaporative cooling supported by a portable means. In particular, the present invention is related to a system and method for cooling livestock during various stages of transport or relocation. A hydraulic system is ideally described that supplies cooling liquid over at least the length of a mobile carrier to utilize evaporative cooling via nozzles and fans that can be controlled all together or separately.

Probable Assignee: BAIN BILLY

Earliest Publication Date: 20110714

77) Family number: 50663313 (FR2963724B)

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ABREUVOIR POUR ANIMAUX DE BASSE-COUR ET AUTRES ANIMAUX DE RENTE AGENCE POUR REDUIRE LE DEVELOPPEMENT MICROBIEN ANAEROBIE

Abstract: The trough has a water flow surface (2) extending inclinedly from a water flow delivering upper zone toward a water flow recovery lower zone, where the upper zone comprises a delivery nozzle (3). A chute (4) comprises a water evacuation core that is connected with a pumping circuit (5) to draw water in the chute and to supply the water to the nozzle when the pumping circuit is active. The nozzle is oriented toward a deflecting wall (7) placed in an upper part next to the flow surface.

Probable Assignee: BONTEMPS JEROME

Earliest Publication Date: 20120217

78) Family number: 67719083 (CN206699092U)

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RAIS LIVESTOCK OR POULTRY AND USE INTELLIGENT DRINKING BOWL

Abstract: Source: CN206699092U The utility model provides a rais livestock or poultry and use intelligent drinking bowl, count (5) and **water drinking** nozzle (4) including two tee bend electromagnetic **water valve** (1), flow measurement, two entry ends of two tee bend electromagnetic **water valve** (1) are clean water pipe (2) and liquid medicine pipe (3) respectively, flow measurement meter (5) is connected to the exit end of two tee bend electromagnetic **water valve** (1), and then communicates with each other with **water drinking** nozzle (4), and under two tee bend electromagnetic **water valve** (1) cold condition, clean water pipe (2) are linked together with flow measurement meter (5), and under the condition of two tee bend electromagnetic **water valve** (1) circular telegram, liquid medicine pipe (3) are linked together with flow measurement meter (5). The utility model discloses a plant provides one kind can be directed against different individual animals, puts in different dosage medicines to can make statistics of simultaneously every animal water intake's every day **water drinking** nozzle.

Probable Assignee: WUHAN KAIFENG HUAKE INTELLIGENT FARM TECH CO LTD

Earliest Publication Date: 20171205

79) Family number: 13330744 (US5692386A)

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COOLING APPARATUS FOR AN ANIMAL CONFINEMENT HOUSE

Abstract: Source: US5692386A A water cooling apparatus utilizes a conventional ice maker to produce ice which is deposited into a large insulated storage tank. The insulated storage tank includes a suspended grate to hold the deposited ice and spray nozzles positioned above the grate bathe the ice with water. Upon spraying, the ice suspended in the tank partially melts, combines with, and cools the sprayed water. A reservoir in the bottom of the tank collects the cooled water, and a sump pump in the bottom of the reservoir pumps water out of the storage tank to a distribution pump. The cooled water is further distributed under pressure to the fogging nozzles positioned in the enclosure's ventilation system. Sensors monitor the level of ice on the grate, the level of cooled water in the reservoir, and the temperature of the animal enclosure. Control circuitry supervises the amount of water sprayed over the ice, the production of ice into the storage tank, and the amount of water pumped out of the reservoir so that sufficient cooling of the enclosure is achieved. Regardless of the outside ambient temperature, the apparatus has the capacity to maintain the water temperature between 32 DEG F. and 40 DEG F. at the fogger nozzles in the enclosure's ventilation air stream. All of the components of the apparatus are powered by a traditional single phase electrical source.

Probable Assignee: C AND S MFG

Earliest Publication Date: 19971202

80) Family number: 50663052 (FR2963723B)

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ABREUVOIR POUR ANIMAUX DE BASSE-COUR ET AUTRES ANIMAUX DE RENTE AGENCE POUR REDUIRE LES PERTES D'EAU

Abstract: The trough has a water flow surface (2) inclinedly extending from a water flow delivering upper zone comprising a delivery nozzle (3) arranged in a recovery chute (4) toward a water flow recovery lower zone. The chute comprises a water evacuation core in relation communication with a pumping circuit (5) adapted to draw water in the chute and supply to the nozzle when the pumping circuit is active. The recovery chute is associated to an obstacle (6) making the chute as inaccessible to animals and formed by a horizontal rod arranged in an upper part of the chute above a water level.

Probable Assignee: BONTEMPS JEROME

Earliest Publication Date: 20120217

81) Family number: 69058214 (CN207157038U)

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TRUCK ENVIRONMENT CONTROL DEVICE FOR LIVESTOCK AND POULTRY (MACHINE TRANSLATION)

Abstract: Source: CN207157038U The utility model discloses a method for poultry transportation vehicle environment control means, said control means comprises a semi-enclosed car environment, ventilation windows, air and water ad libitum mechanism; Ventilation window and wind machines were set in semi-enclosed compartment, the two sides; Drinking mechanism disposed in the bottom of the semi-enclosed cabin and **drinking water** mechanism includes a water storage tanks, pipes, drinking nipple and nozzle, passes through the intake check valve, relief valve, intake air switching valve connected with the source of compressed air, the air inlet is also connected with the atmosphere through the exhaust valve; Switching valve and water through the water inlet connected to the outlet valve by the water switch and a plurality of drinking nipple connection, source of compressed air, and an intake switching valve is also equipped with quick access to the valve. The environmental control device as much as possible during transport in livestock and poultry, livestock and poultry provide a comfortable environment, thus improving the survival rate of long-distance transport of livestock; And, in the transport process can achieve on the surrounding environment-friendly.

Probable Assignee: LARGE INVASIVE PRECISION EQUIPMENT

Earliest Publication Date: 20180330

82) Family number: 28247281 (US2002104485A)

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METHOD AND APPARATUS FOR DISPENSING A LIQUID LIKE GEL OR THE LIKE WHICH MAY BE USED TO TREAT DEHYDRATION IN ANIMALS SUCH AS CHICKS AND WHICH MAY BE USED TO CARRY OTHER BIOLOGICAL SUBSTANCES, FOR EXAMPLE, VACCINES, NUTRIENTS, ANTIBIOTICS AND THE LIKE FOR OTHER TREATMENT PURPOSES

Abstract: Source: US2002104485A A dispensing device which controls a rate and an amount of discharge of a substance which may be used to treat animals for any number of reasons. The dispensing device has a tank including a top, a bottom and a cover. A movable piston is positioned within the tank, and the movable piston separates the tank into an upper chamber being above the movable piston and a lower chamber being below the movable piston. The dispensing device also includes a dispenser in fluid communication with the tank, and a dispensing head in fluid communication with the dispenser. The dispensing head further includes a plurality of apertures near an outer diameter of the dispensing head.

Probable Assignee: MS BIOSCIENCE

Earliest Publication Date: 20020808

83) Family number: 23022219 (US3150638A)

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SELF-CLEANING WATER FOUNTAIN

Abstract: Source: US3150638A (Claim 1) 1. A self-cleaning fountain comprising an elongated endless flexible belt entrained over a pair of spaced supports and defining at least one generally horizontally disposed reach, means drivingly engaged with said belt for effecting longitudinal movement thereof relative to and about said supports, guide means disposed for engagement with at least a portion of said one reach and laterally deflecting said portion of said one reach along a plane generally paralleling its longitudinal center line and forming an upwardly opening trough therefrom extending longitudinally of said portion of said one reach adapted to retain liquids therein and having upwardly divergent opposite end portions.

Probable Assignee: ROBERT C OLIVER

Earliest Publication Date: 19640929

84) Family number: 11702116 (US5950565A)

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ANIMAL HUSBANDRY CONTAINMENT APPARATUS

Abstract: Source: US5950565A PCT No. PCT/CA96/00629 Sec. 371 Date Mar. 19, 1998 Sec. 102(e) Date Mar. 19, 1998 PCT Filed Sep. 20, 1996 PCT Pub. No. WO97/10706 PCT Pub. Date Mar. 27, 1997A system for housing animals in animal husbandry, particularly for raising pigs comprises a separately transportable container (15) manufactured from metal walls (20-24) which is individually supplied with a fan ventilation system (37), a bottom manure container and a feed supply (60). The animals can be transported in the container (15) and maintained in the container (15). The container can be located in rows of the container along a central alleyway (10) through which the animals can be moved and which supplies the necessary facilities. In one use of the system, the animals can be transported to a position adjacent to but spaced from a new location and maintained in quarantine until the possibility of disease is passed. In a further process for the Isowean system of raising pigs, the nursery stage between the farrowing stage and the finisher stage is carried out in the containment vessel thus avoiding additional movement of the animals which is stressful for the animals.

Probable Assignee: GUYOT JEAN NOEL

Earliest Publication Date: 19970327

85) Family number: 53513206 (CN202857509U)

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SPRAY COOLING AND **WATER SUPPLYING DEVICE USED FOR INTERIOR OF LIVESTOCK AND POULTRY CARRIER**

Abstract: Source: CN202857509U The utility model provides a spray cooling and **water supplying** device used for interior of a livestock and poultry carrier. The spray cooling and **water supplying** device used for the interior of the livestock and poultry carrier is characterized by comprising at least one water tank, wherein a one-way valve and an air inlet valve are arranged at an air channel end of the water tank in sequence and in series, the air inlet valve is connected with a compressed air inlet, a two-position three way magnetic valve is connected at a water channel end of the water tank, and the two-position three way magnetic valve is further connected with a spraying nozzle and a **water drinking** nipple. The spray cooling and **water supplying** device used for the interior of the livestock and poultry carrier is mainly used for controlling spray cooling and **water supplying** of the interior of the livestock and poultry carrier in a whole sealing environment and has the advantages that compressed air sources of a car chassis are used as power without extra power needed.

Probable Assignee: SHANGHAI XINBAIQIN VEHICLE CO LTD

Earliest Publication Date: 20130410

86) Family number: 67880152 (CN206744158U)

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FULL -AUTOMATIC POULTRY FARM SHED

Abstract: Source: CN206744158U The utility model discloses a full -automatic poultry farm shed, its structure is including the building body, the gate, and a water pipe, the watering shower nozzle, the exhaust window, the side window, **drinking water** pipe, farm shed, automatic dispenser, the cascade admits air, the watering shower nozzle includes the profile of tooth breakwater, the pipe support, the temperature -sensing element, the valve block, the hickey, full -automatically raise poultry in order to realize, improve farm shed's safety simultaneously, farm shed head and the tail both ends are equipped with automatic dispenser and **drinking water** pipe respectively and can carry out the automation to the livestock and raise, building body top central point puts to be equipped with and is equipped with the watering shower nozzle on the water pipe pipe wall, when the internal portion's temperature of building reaches the set temperature, the valve block can automatic be opened to the temperature -sensing element, watering shower nozzle automatic watering, realize the cooling.

Probable Assignee: PENG YOUNBIN

Earliest Publication Date: 20171215

87) Family number: 16968338 (DE29811877U1)

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AALBETAEBUNGSANLAGE

Abstract: Source: DE29811877U1 (Claim 1) An m el d e r i n : A t i n o s DR . VONNEMANN PARTNER Unser Zeichen: 0488pa Schutzansprueche 1.

Machine translation: (Claim 1) at m el D e r i n : A t i n o s Dr. VONNEMANN our indication: 0488pa Requirements for protection 1.

Probable Assignee: ATMOS ANLAGEN UND VERFAHRENSTE

Earliest Publication Date: 19980924

88) Family number: 1247899 (US3942479A)

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COMBINED VENTILATOR AND FEEDER FOR AVIAN

Abstract: Source: US3942479A A combined ventilator and fluent material feeder for avian including air recirculating and conditioning means. The ventilating and feeder units include self-feeders for both loose food material and **drinking water**. Each typically includes a trough encircling a storage chamber as well as an air distributor for supplying ventilating air across the floor and outwardly from beneath the feeding troughs as used dirt-laden air is withdrawn from above the feeding troughs.

Probable Assignee: POWERS GILBERT L

Earliest Publication Date: 19760309

89) Family number: 22372565 (US2601844A)

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CLEANING APPARATUS FOR BATTERY CAGES

Abstract: Source: US2601844A (Claim 1) 1. I claim: I ' Cleaning apparatus for a unit of a poultry battery or ilite structure characterized by, a plurality of cages arranged in a longitudinal row and each having a dropping floor associated at a lateral margin thereof with a receiver extending longitudinally of the cages, comprising a shaft member mounted for lateral translation over said floor transversely of said row and toward said receiver, a scraper blade carried by said shaft member in scraping engagement with said floor as said shaft member is translated laterally across said floor, and means to so translate said shaft member.

Probable Assignee: LOVELL RAYMOND L

Earliest Publication Date: 19520701

90) Family number: 13546545 (GB2329240A)

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COOLING AND HUMIDIFICATION SYSTEMS

Abstract: Source: GB2329240A A cooling and humidification system designed to be installed in an animal husbandry house with the intention that it can be used alternately for cooling the atmosphere or raising humidity by evaporation, and cooling the animal directly by contact with the skin. The position of the nozzles in the house can be easily adjusted. A fast acting valve incorporated with one or more nozzles allowing short water bursts without dripping. In addition the design of the valve may allow automatic selection of different nozzles to provide different spray characteristics.

Probable Assignee: CONSIDINA WILLIAM H

Earliest Publication Date: 19990317

91) Family number: 24151428 (WO02089565A1)

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DOSING SYSTEM

Abstract: A dosing facility and a method for dosing additives for dry or fluid materials, which are carried in pipeline facilities are described, whereby it is avoided that the added substances, e.g. aromatic substances, medicine, feed additive, vitamins, proteins, oil, fungicide, micro organisms, pre-heated fat, etc. are de-mixed during the transport in the pipeline facility. Thereby is achieved a facility and a method, where one or more dosing stations are arranged directly communicating with a transport pipeline and that the additive is in fluid form and is supplied directly upon the material in the pipeline at the passing of a dosing station in the pipeline.

Probable Assignee: DALTEC AS

Earliest Publication Date: 20021114

92) Family number: 40461159 (EP1844650A1)

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DEVICE AND PROCESS FOR CRAMMING POULTRY

Abstract: The machine has a food intake part (4) comprising a screw feeder (13) controlled by a motor and distributing the food to a food inlet part (5). The part (5) has a screw feeder (14) emerging into inclined feeding tubes (6). The feeder (13) is calibrated for having a rate compatible with a rate accepted by the part (5). The feeder (13) is configured for providing food volume calibrated based on working time. The part (5) has a buffer zone formed by a funnel (53) between the feeders. An independent claim is also included for a volatile e.g. palmiped, feeding method.

Probable Assignee: ARGUINDEGUY JEAN JACQUES

Earliest Publication Date: 20071017

93) Family number: 65882754 (US2017172055A)

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SYSTEM AND METHOD FOR ANAEROBIC DIGESTION OF ANIMAL WASTES

Abstract: Source: US2017172055A A new method of disposing of waste for the hog industry is disclosed which avoids use of lagoons. Manure is semi-continuously dewatered, anaerobically digested and digested with biomass to produce bio-organic fertilizer and biogas.

Probable Assignee: HOLISTIC FARMING INC HFI

Earliest Publication Date: 20170531

94) Family number: 2227141 (WO8607438A1)

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A METHOD AND SYSTEM FOR RENEWING AIR IN A ROOM OF A BUILDING

Abstract: An air renewing system for renewing air in an inner space or room of a building comprises one or more air flow passages (39) extending upwards along at least part of the roof (37) of the building so that the air within the flow passages may be heated by the sun and/or the ambient atmosphere outside the building. Such heating generates an upwards directed air flow through the air passages. The upper end of the air flow passages (39) may communicate with the ambient atmosphere, and the lower end of the air flow passages may be connected to the room to be ventilated. Alternatively, the lower ends of the air flow passages may also be connected to the ambient atmosphere, and in that case the air flow generated may be used for sucking air from the room to be ventilated by ejector effect. Fresh air may flow into the room to be ventilated through air inlet openings, which may, for example, be defined in partition walls, feeding apparatuses (25) extending transversely through the room, or in the floor (17) of the room. The air supplied to the inlet openings may pass a cellar or another undergroundspace in order to be cooled. Further cooling of the inflowing air may be obtained by passing the inflowing air through a water evaporator.

Probable Assignee: HOFFMANN AND SOENNER A S H

Earliest Publication Date: 19861203

95) Family number: 42768930 (ES1068981U)

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BEBEDERO DE INTEMPERIE POR CARGA PLUVIAL DRINKER OF CHARGE BY WEATHER STORM (MACHINE TRANSLATION)

Abstract: Source: ES1068981U 1. Bebedero de intemperie por carga pluvial que es un deposito-aljibe con capacidad para 100, 200, 400 o mas litros, asociado con tolva de recogidas de aguas pluviales; lecho filtrante y fuertemente arriostrado al terreno que se caracteriza porque es una cubeta (1) de forma conico invertida o en forma de tinaja y en el que, la tolva (4), forma un solo cuerpo con la tapa (2) que cierra la boca de la cubeta enclavando por dentro mediante cierres a bayoneta (7), por ejemplo: al cuarto de vuelta, y en la que el cierre de dicha tapa (2) es una superficie agujereada filtrante (3) sobre la que se deposita una capa (6) de canto rodado o balasto para decantar el agua, estableciendo un nivel por encima del cual se situa una linea de agujeros (5) que son aliviaderos para la sobrecarga de agua y, el fondo (9) de la cubeta (1), va encajada (10) una cisterna (11) que alimenta la cazoleta (12) o bebedero-abrevadero propiamente dicho que esta dotada de un flotador de nivel (13) para una valvula de admision (14) de alimentacion de dicha cazoleta (12), de modo que, cuando baja el nivel, la valvula se abre. 2. Bebedero de intemperie por carga pluvial segun la reivindicacion 1, que es un deposito-aljibe con capacidad para 100, 200, 400 o mas litros, asociado con tolva de recogidas de aguas pluviales, lecho filtrante y fuertemente arriostrado al terreno que se caracteriza porque la cubeta (1), va dispuesta en correspondiente vaciado, alojamiento (15a) por debajo de una base o peana (15) que es una pieza en hormigon armado que hace de lastre con mas de 100 kg de peso y tiene un vaciado (16) en la cara superior donde encaja la cubeta (1), que consta de lenguetas o cartolas radiales (18) de amarre a la base mediante arriostrado vertical (17) al terreno donde se implante. 3. Bebedero de intemperie por carga pluvial segun la reivindicacion 1, que es un deposito-aljibe con capacidad para 100, 200, 400 o mas litros, asociado con tolva de recogidas de aguas pluviales, lecho filtrante y fuertemente arriostrado al terreno que se caracteriza porque la cubeta (1) esta protegida por una barrera periferica de barras (20) de punta roma fijadas en la base lastrada (15) e inclinadas hacia fuera, dejando libre el acceso al bebedero-abrevadero (12). 5. Bebedero de intemperie por carga pluvial segun la reivindicacion 1, que es un deposito-aljibe con capacidad para 100, 200, 400 o mas litros, asociado con tolva de recogidas de aguas pluviales y lecho filtrante fuertemente arriostrado al terreno que se caracteriza porque la cubeta (1) esta dotada central y perifericamente de un zuncho de refuerzo (8) recubierto de fibra de vidrio u otro material plastico. 6. Bebedero de intemperie por carga pluvial segun la reivindicacion 1, que es un deposito-aljibe con capacidad para 100, 200, 400 o mas litros, asociado con tolva de recogidas de aguas pluviales y lecho filtrante fuertemente arriostrado al terreno, que se caracteriza porque el formato de dicha cubeta (1) es especialmente conico invertido para asegurar la vertiente del agua, en formatos de revolucion, con forma de tinajas o prismaticas.

Machine translation: 1. Drinker per charge weathering that storm-water tank is a tank with capacity for 100, 200, 400 or more liters hopper associated with collected rainwater, filter bed and heavily braced to the ground which is characterized by a bucket (1) inverted conical form or in a vat and in which, the hopper (4), form a single body with the lid (2) which closes the mouth of the cup by interlocking inside bayonet closures (7), for example: the quarter turn, and in which the closing of said lid (2) is a leaky filter surface (3) on which is deposited a layer (6) of pebbles or decanting the water ballast, setting a level above which is placed a line of holes (5) which are weirs for the overhead of water and the bottom (9) of the bucket (1), is engaged (10) a tank (11) which feeds the bowl (12) or trough-trough itself that is equipped with a float level (13) to an inlet valve (14) feeding of the bowl (12), so that, when the level, the valve opens. 2. Drinker per charge weathering storm according to claim 1, which is a deposit-tank with capacity for 100, 200, 400 or more liters hopper associated with collected rainwater, filter bed and heavily braced to the ground which is characterized by the bucket (1), is arranged in corresponding emptying, accommodation (15a) below a base or pedestal (15) which is a piece that makes reinforced concrete ballast over 100 kg and has a recess (16) on the upper side where it fits the bucket (1), comprising cartolas languetas or radial (18) anchoring to the base by Vertical bracing (17) to the ground where the implant. 3. Drinker per charge weathering storm according to claim 1, which is a deposit-tank with capacity for 100, 200, 400 or more liters hopper associated with collected rainwater, bed filtrantey strongly braced to the ground which is characterized in background (9) of the bucket (1) has a cap (19) of flushing to empty the bucket (1) fully. 4. Drinker per charge weathering storm according to claim 1, which is a deposit-tank with capacity for 100, 200, 400 or more liters hopper associated with collected rainwater and leach heavily braced to the ground that the basin is characterized (1) is protected by a barrier bars peripheral (20) blunt fixed in the weighted base (15) and inclined outward, allowing you access to the drinking-trough (12). 5. Drinker per charge weathering storm according to claim 1, which is a deposit-tank with capacity for 100, 200, 400 or more liters hopper associated with collected rainwater and leach heavily braced to the ground characterized by the bucket (1) is peripherally provided with a central reinforcement hoop (8) coated fiberglass or other plastic material. 6. Drinker per charge weathering storm according to claim 1, which is a deposit-tank with capacity for 100, 200, 400 or more liters hopper associated with collected rainwater and leach heavily braced to the ground, characterized in that the format of the bucket (1) is inverted conical especially to ensure the water side, in formats of revolution-shaped jars or prismatic.

Probable Assignee: PARRA SANCHEZ JOSE

Earliest Publication Date: 20090101

96) Family number: 201511 (BRPI8704965A)

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**DISPOSITIVO ACIONADOR POR TOQUE
TOUCH STARTER DEVICE (MACHINE TRANSLATION)**

Abstract: Source: BRPI8704965A MM l»M l> |« ss # ss we# ft • ft ft # # # ### ft ##### # # • , • • ft # # • • • ft»# FJSh-Vo A0/ KSI/C' i ItBSOMCf, Patente de Invencao - "DISPOSITIVO ACIO- NADQB POB TOqUB'C Dispositivo acionador por toque» projet 5 do para o emprego nos bebedouros para aves» constituido 1 por uma Ungueta plastica» provida de aba inclinada» haaU te vertical de sustentacao e seccao chapada horizontal » Ungueta essa presa no pino de articulacao» localizado e fixo sob o patamar da valvula que libera e Interrompe a 10 quecfa d'ggua; a aba da Ungueta avanca para o centro inte£ no do reservatorio do dito bebedouro; a seccao chapada ho rizontal est# permanentemente unida com o extremo infe- 1 rior do pino vertical da v _Lvula_ o acionamento da lin- 1 gueta em causa ocorre atraves do toque do bico da ave » 15 por ocasio da bebida do liquido; o setor inferior e in-1 terno do reservatorio possui um corredor de escoamento do liquidei1 MM l» M l> | ' ss # ss we # ft • ft ft ### ### ft ### • , • • • • • ft # ft» # FJSh-Vo A0/KSI/C ' i ItBSOMCf, Invention patent-actuated DEVICE "NADQB POB TOqUB ' C touch Starter Device» 5 of the employment project in bird feeders» 1 by a Ungueta constituted plastica» with sloping tab» origin and vertical you haaU section high horizontal» Ungueta that stuck in coordination pin» located and fixed under the valve that releases and stops 10 quecfa d ggua; the Ungueta tab moves to the center of the reservoir in lbs inte said water cooler; the section high ho rizontal est # permanently joined to the far lower-back vertical pin 1 v_ Valve _ the firing of lin-1 gueta concerned occurs through the touch of the bird's Beak ' 15 on the occasion of the liquid beverage; the lower sector and in-1 reservoir suit has a flow of liquidei1

Probable Assignee: OSVALDO FLAVIO MOTERANI RICCI

Earliest Publication Date: 19890404

97) Family number: 42667795 (WO08151788A1)

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METHOD FOR TREATING EXHAUST AIR ARISING FROM AGRICULTURAL LIVESTOCK BREEDING

Abstract: Outlet air from stables used for agricultural livestock breeding is charged with strong-smelling substances and harmful substances that can be only be released into the environment to a limited extent. Known methods for removing or at least reducing harmful substances or strong-smelling substances from air in stables are very expensive. The aim of the invention is to remove harmful substances and/or strong-smelling substances from the outlet air in stables to at least a large extent, the outlet air from stables being brought into contact with an ozonised liquid, in particular a liquid spray. As a result, harmful substances and strong-smelling substances in the outlet air of the stables can be at least further reduced in a treatment step such that they do not exceed public legal limits.

Probable Assignee: LUBING MASCHF LUDWIG

Earliest Publication Date: 20081218

98) Family number: 43648227 (BRMU8800156Y)

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DISPOSICAO EM CONJUNTO DE BEBEDOURO COM INTERTRAVAMENTO

Abstract: Source: BRMU8800156Y Resumo: DISPOSICAO EM CONJUNTO DE BEBEDOURO COM INTERTRAVAMENTO em que a linha de bebedouro (1) e formada por segmentos de dutos (3), cada um provido de no minimo um bico de 5 agua (4) e um aparador de gotas (5), conjunto associado por um grampo (6) a uma barra estabilizadora (7), sendo os segmentos (3) providos em suas extremidades de fendas (8), que cooperam com nervuras axiais (10) de uma peca de uniao (9) para obter o travamento, enquanto os bicos de agua (4) apresentam membros io diagonais confrontantes (15), para fixacao por giro, alem de uma parte saliente (17) que sera retida por um encaixe (16) do grampo (6), que une a barra estabilizadora (7) a linha de agua.

Probable Assignee: AGROMARAU IND E COM LTDA

Earliest Publication Date: 20090811

99) Family number: 66492366 (CN206354204U)

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A FULL -AUTOMATIC WATER SYSTEM OF FEEDING FOR POULTRY PLANT

Abstract: Source: CN206354204U The utility model discloses a full -automatic water system of feeding for poultry plant, including inside be provided with programmable controller and with central processing unit, many length of branches bar basin of programmable controller electric connection's time -recorder, set up in under the bottom of gullet and with the delivery pipe of basin through connecting the nozzle stub and connect, with **supply water** piping connection and be used for to the raceway that the delivery pipe **supplied water**, this raceway is connected with outside water source, the basin with delivery pipe quantity and length homogeneous phase are together, the bottom of gullet is provided with a plurality of classs of interval distribution's water inlet along the bottom surface central line, connect the nozzle stub and connect the water inlet, be provided with water inlet solenoid valve on the connection nozzle stub, water inlet solenoid valve with central processing unit electric connection. The utility model has the characteristics of simple structure, fault rate are low, resources are saved, raise with low costs.

Probable Assignee: BEIJING YONGKUN YUNONG TECH PROMOTION CO LTD

Earliest Publication Date: 20170728