

Diego Gonzalez

1) Family number: 28431930 (US2003056729A)

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Title: AUTOMATED EGG INJECTION MACHINE AND METHOD

Abstract: 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.

Classifications:

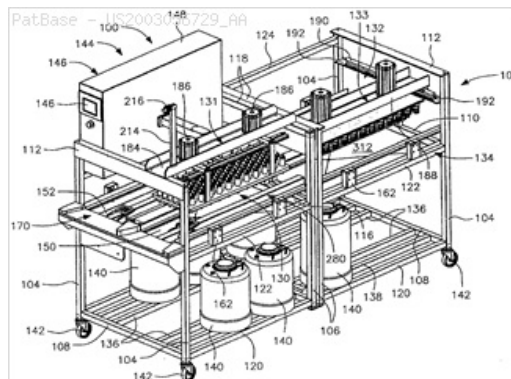
International (IPC 8-9): A01K43/00 A01K45/00 A61D1/02 B66C1/02 G01F11/28 (Advanced/Invention)

International (IPC 1-7): A01K45/00

CPC: A01K45/007

European: A01K45/00C

US: 119/6.8 119/6.800P 294/65



Family:

Publication number	Publication date	Application number	Application date
AT321447 E	20060415	AT20020020323T	20020911
AT488133 E	20101215	AT20020009000T	20020911
CA2402701 AA	20030312	CA20022402701	20020910
CA2402701 C	20071127	CA20022402701	20020910
CA2601940 AA	20030312	CA20022601940	20020910
CA2601940 C	20111115	CA20022601940	20020910
DE60210183 D1	20060518	DE20026010183	20020911
DE60238355 D1	20101230	DE20026038355	20020911
EP1310164 A2	20030514	EP20020020323	20020911
EP1310164 A3	20040114	EP20020020323	20020911
EP1310164 B1	20060329	EP20020020323	20020911
EP1557083 A2	20050727	EP20050009000	20020911
EP1557083 A3	20060104	EP20050009000	20020911
EP1557083 B1	20101117	EP20050009000	20020911
ES2260366 T3	20061101	ES20020020323T	20020911
ES2360825 T3	20110609	ES20050009000T	20020911
US2003056729 AA	20030327	US20010949900	20010912
US2004163602 AA	20040826	US20030696551	20031030
US2005039688 AA	20050224	US20040868361	20040616
US2006185601 AA	20060824	US20060400309	20060410
US2007144443 AA	20070628	US20070712989	20070302
US2008202427 AA	20080828	US20070003645	20071228
US2008202428 AA	20080828	US20070003647	20071228
US2012222621 AA	20120906	US20110200409	20110923
US7096820 BB	20060829	US20030696551	20031030
US7185603 BB	20070306	US20040868361	20040616
US7360500 BB	20080422	US20060400309	20060410
US7503279 BB	20090317	US20070712989	20070302
US7878147 BB	20110201	US20070003647	20071228
US8025028 BB	20110927	US20070003645	20071228

Priority:

US20010949900 20010912	US20010949900 20010921	CA20022402701 20020910
CA20022601940 20020910	EP20020020323 20020911	US20030696551 20031030
US20040868361 20040616	US20060400309 20060410	US20070712989 20070302
CA20072402701 20071022	US20070003645 20071228	US20070003647 20071228
US20110200409 20110923		

Probable Assignee: SANOVO CAPITAL A S

Assignee(s): (std): AVITECH ; AVITECH HEBRON ; AVITECH INC ; AVITECH LLC ; BEVENSEE ERICH F ; CORREA RAFAEL S ; QUIROZ MARCO A ; SAMSON WILLIAM D

Assignee(s): WEST STAR FOODS BV ; SANOVO CAPITAL A S

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Inventor(s): BEVENSEE ERICH ; CORREA RAFAEL ; QUIROZ MARCO ; SAMSON WILLIAM ; WILLIAM D SAMSON ; RAFAEL S CORREA ; MARCO A QUIROZ ; ERICH F BEVENSEE

Agent(s): G RONALD BELL AND ASSOCIATES; THOMA MICHAEL; JACOBSON HOLMAN PLLC

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

2) Family number: 60811756 (US2015327521A)

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Title: METHOD AND DEVICE FOR CONDITIONAL IN OVO INJECTION

Abstract: The present invention provides in ovo injection devices, including a novel vaccine/substance conservation valve (VCV), a needle depth adjuster (NDA), and methods for selectively delivering vaccines and other substances to eggs in the context of poultry hatcheries. The valve of the present invention allows for the conditional dispensing of vaccines and other substances dependent upon the presence or absence of an egg. When an egg is present, the valve becomes activated, allowing vaccines or other substances to be injected. When an egg is absent, the valve is not activated, thus vaccines and other valuable substances are conserved. The NDA allows embryonated eggs to be more safely injected by reducing the depth of needle penetration, particularly in smaller eggs.

Classifications:

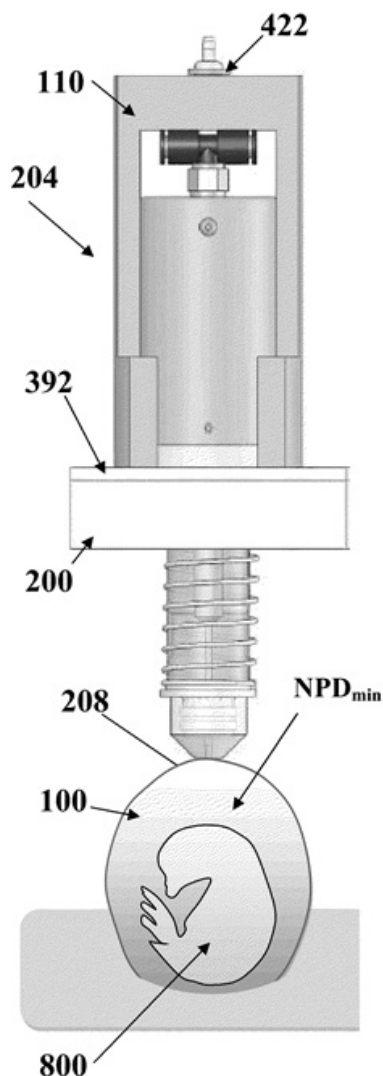
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A01K45/00 (Core/Invention)

CPC: A01K43/00 A01K45/007

US: 119/6.8

PatBase - US2015327521_AA



Family:

Publication number	Publication date	Application number	Application date
AU2015264339 AA	20170105	AU20150264339	20150519
BR112016027224 A2	20170815	BR20161127224	20150519
CA2949682 AA	20161118	CA20152949682	20150519
DE602015013451 D1	20180809	DE201560013451T	20150519
EP3145306 A1	20170329	EP20150728270	20150519
EP3145306 B1	20180711	EP20150728270	20150519
EP3395168 A2	20181031	EP20180172441	20150519
EP3395168 A3	20190306	EP20180172441	20150519
EP3395169 A1	20181031	EP20180172437	20150519
ES2690836 T3	20181122	ES20150728270T	20150519
HK1235624 A1	20180316	HK20170109449	20170918
HK1235624 B	20190726	HK20170109449	20170918
HK1258655 A1	20191115	HK20190101019	20170918
MX2016015166 A1	20170327	MX20160015166	20150519
NZ727221 A	20180525	NZ20150727221	20150519
US2015327521 AA	20151119	US20150716567	20150519
WO15179417 A1	20151126	WO2015US31605	20150519

Priority:

US20140000245P 20140519 EP20150728270 20150519 US20150716567 20150519
WO2015US31605 20150519 HK20170109449 20170918

Probable Assignee: MERIAL INC

Assignee(s): (std): MERIAL SAS ; MERIAL INC

Assignee(s): NGUYEN CHIEN DINH ; BEVENSEE ERICH ; BOEHRINGER INGELHEIM ANIMAL HEALTH USA INC ; LESLIE CHRISTOPHER DAVIS ; MERIAL INC DULUTH

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Inventor(s): BEVENSEE ERICH FRISCO ; LESLIE CHRISTOPHER DAVIS CLEVELAND ; NGUYEN CHIEN DINH BRASELTON

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RECHTSANWAELTE MBB; D YOUNG AND CO LLP; DEACONS; JARECKI BLACK JUDY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 67231875 (US2017296749A)

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Title: POWERED INJECTION DEVICE FOR DELIVERING MULTIPLE LIQUID FORMULATIONS, INCLUDING VACCINES

Abstract: The invention relates to hand-held, powered injection devices, for administering fluids, including vaccines, to animals. The invention further relates to methods of use of the powered injection device for vaccinating avian animals. Powered injection devices according to the instant disclosure are ergonomically friendly, and offer rapid and consistent dosing, particularly for avian animals.

Classifications:

International (IPC 8-9): A61D1/02 A61M A61M5/145 A61M5/19 A61M5/20 A61M5/315 A61M5/32 (Advanced/Invention)

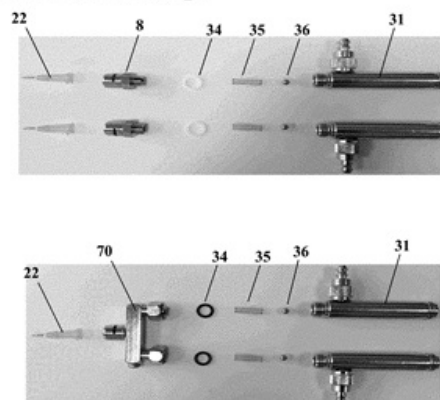
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CPC: A61M5/14526 A61M5/2053 A61M5/31501 A61M5/31513 A61D1/025

A61M5/19 A61M5/2066 A61M5/31578 A61M5/3298 A61M2250/00

US: 1/1 604/506

PatBase - US2017296749_AA

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Publication number	Publication date	Application number	Application date
AR108963 AA	20181017	AR2017P100953	20170412
BR112018071121 A2	20190205	BR20181171121	20170413
CA3020906 AA	20181012	CA20173020906	20170413
CO20180011353 A2	20190118	CO20180011353	20181024
EP3442619 A2	20190220	EP20170732617	20170413
HK40003107 A1	20200403	HK20190126724	20190712

ID201900060 A	20190104	ID2018P0008980	20170413
IN201847041594 A	20181221	IN201847041594	20181102
MA43615 A1	20190430	MA20170043615	20170413
MX2018012406 A1	20190130	MX20180012406	20170413
US2017296749 AA	20171019	US20170487308	20170413
US10434257 BB	20191008	US20170487308	20170413
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WO17180912 A3	20171109	WO2017US27487	20170413

Priority:

US20160322072P 20160413 US20170487308 20170413 WO2017US27487 20170413

Probable Assignee: BOEHRINGER INGELHEIM ANIMAL HEALTH USA INC

Assignee(s): (std): BOEHRINGER INGELHEIM ANIMAL HEALTH USA INC ; BOEHRINGER INGELHMEIM ANIMAL HEALTH USA INC ; Merial Inc

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Agent(s): SMART AND BIGGAR; D YOUNG AND CO LLP; DEACONS; BUDI RAHMAT SH; JARECKI BLACK JUDY; LOWDER PATRICK

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

4) Family number: 31347688 (US2007167907A)

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Title: NEEDLE FREE HYPODERMIC INJECTOR AND AMPULE FOR INTRADERMAL, SUBCUTANEOUS AND INTRAMUSCULAR INJECTION

Abstract: A needle free hypodermic injector comprising a hand manipulatable elongate housing, an impact impulse injection mechanism within the housing, a suction generating means within the housing and cooperable with the impact impulse injection mechanism, a safety interlock mechanism, at least one medicament containing ampule cooperable with the impact impulse injection mechanism and the suction generating means and having a jet orifice through which medicament is injectable through a skin surface in response to an impulse placed on the medicament by the impact impulse injection mechanism, and means to receive and hold the ampule on the injector in registration with the impact impulse injection mechanism and in communication with the suction generating means; whereby the injector is adapted to expel the medicament from the ampule in a jet stream of sufficient velocity to penetrate skin tissue held against the orifice by the suction generating means and to deposit the medicament intradermally, subcutaneously or intramuscularly based on the position and angle of the jet orifice.

Classifications:

International (IPC 8-9): A61M5/30 (Advanced/Invention);

A61M5/20 A61M5/24 A61M5/42 (Advanced/Non-invention);

A61M5/30 (Core/Invention);

A61M5/20 A61M5/24 A61M5/42 (Core/Non-invention);

A61M (Subclass/Invention)

International (IPC 1-7): A61M5/30

CPC: A61M5/204 A61M5/24 A61M5/30 A61M5/425 A61M2005/005

A61M2005/2418 A61M5/2053 A61M2005/202 A61M2005/2073

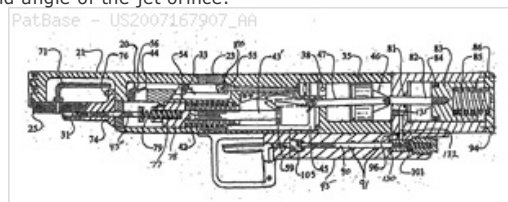
European: A61M5/30 K61M5/00P4 K61M5/20D K61M5/24 K61M5/24D

K61M5/42C

US: 604/68 604/72

JP F-Term: 4C066 4C066/DD02 4C066/EE17 4C066/QQ27 4C066/QQ32 4C066/QQ41

JP F-Index: A61M5/30 A61M5/315/500 A61M5/42/500 A61M5/42/510



Family:

Publication number	Publication date	Application number	Application date
JP2007518460 T2	20070712	JP20060532903T	20040510
US2007167907 AA	20070719	US20040555742	20040510
US6939319 BA	20050906	US20030603496	20030625
WO04101025 A2	20041125	WO2004US14511	20040510
WO04101025 A3	20050609	WO2004US14511	20040510

Priority:

US20020427708P 20021120 US20030469443P 20030509 US20030603496 20030625
US20040555742 20040510 WO2004US14511 20040510

Probable Assignee: INTRAVACC INC

Assignee(s): (std): ANSTEAD CONRAD ; BRANT ROBERT ; BRANT ROBERT W ; DESLIERRES JOHN ; DESLIERRES JOHN M ; INTRAVACC INC

Inventor(s): (std): DESLIERRES JOHN ; ANSTEAD CONRAD ; BRANT ROBERT W ; DESLIERRES JOHN M ; BRANT ROBERT

Agent(s): SHERMAN AND ASSOCIATES

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

5) Family number: 62163849 (CN105498046A)

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Title: PNEUMATIC NEEDLELESS INJECTOR

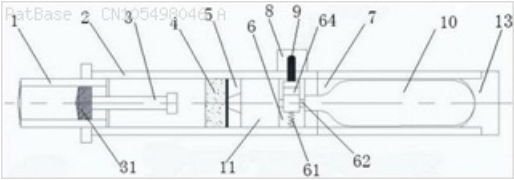
Abstract: The invention relates to the technical field of injectors, in particular to a pneumatic needleless injector. The pneumatic needleless injector comprises a cylinder and a needleless medicine storage tube installed at the front end of the cylinder and used for containing an injection or vaccine. An end cover is arranged at the tail end of the cylinder. A power cavity used for storing a small disposable pressure storage steel bottle, a control device used for controlling the injector to work, an energy storage cavity, a middle cover, a sealing damping device, a piston and a piston push rod are sequentially arranged in the cylinder from the tail end to the front end. A rubber piston is connected to the piston push rod and located in the needleless medicine storage tube. The control device comprises a button switch, a valve body, a valve element and a spring, and a safety device is arranged on the button switch and used for preventing misoperation of a user. In the injection process, the safety device is removed, the switch is pressed, and then injection operation can be carried out. The pneumatic needleless injector has the advantages that the structure of a triggering and pushing device is greatly simplified, operation is convenient, cost is low, injection efficiency is high, and reliability is high.

Classifications:

International (IPC 8-9): A61M5/20 A61M5/303

A61M5/31 (Advanced/Invention)

CPC: A61M5/30 A61M5/2053 A61M5/31 A61M2005/2026 A61M2205/19



Family:

Publication number	Publication date	Application number	Application date
CN105498046 A	20160420	CN201610019472	20160113

Priority:

CN201610019472 20160113

Probable Assignee: BEIJING BUTENG MEDICAL TECH CO LTD

Assignee(s): (std): BEIJING BUTENG MEDICAL TECH CO LTD

Assignee(s): BEIJING BUTENG MEDICAL TECHNOLOGY CO ; BEIJING MEDICAL TECHNOLOGY CO LTD TENG STEP

Inventor(s): (std): LIU YICHEN ; CHEN WEI