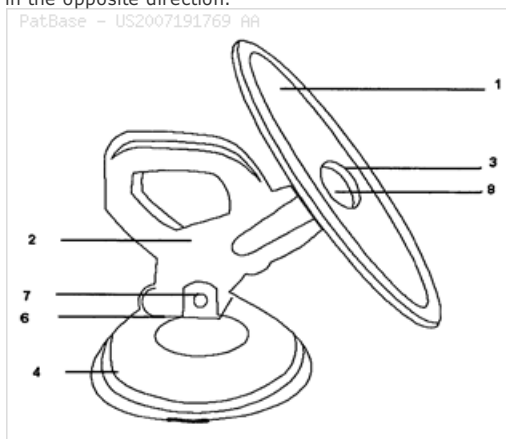


1) Family number: 35074616 (US2007191769 AA)

© PatBase

Title: NEEDLE UNCAP/RECAP SAFETY DEVICE

Abstract: A device and a method that allows a user to safely uncap or recap the protective cap, cover, or shield of a sharps instrument with one-hand and without injury in multiple settings. The device includes a removable protective shield that attaches to a main housing with a cone shaped threaded capture-release mechanism, a handle, and an adjustable multi-surface attachment means to protect the user from sharp or needle-stick while capping or recapping sharp instruments. The removable protective shield has an orifice that effectuates the insertion of the needle through the shield to the reach main housing capture-release mechanism while protecting the users hand. The present invention also includes a method by which the device is to be used for the safe removal and replacement of protective, cap, cover, or sheath of a sharp instrument as the main housing contains a threaded capture-release mechanism that grips the protective cap, cover, or sheath when twisted. The protective cap, cover, or shield is released when twisted in the opposite direction.

Classifications:**International (IPC 8-9):** A61M5/00**CPC:** A61M2005/3215 A61M5/3213**US:** 604/110**Family:**

Publication number	Publication date	Application number	Application date
US2007191769 AA	20070816	US20060351542	20060210

Priority:

US20060351542 20060210

Probable Assignee:

MEITTUNEN ERIC J

Assignee(s): (std):

MEITTUNEN ERIC J

Inventor(s): (std):

MEITTUNEN ERIC J

Inventor(s):

MEITTUNEN ERIC

Agent(s):

WARREN A REITER

2) Family number: 30887573 (US6203529 BA)

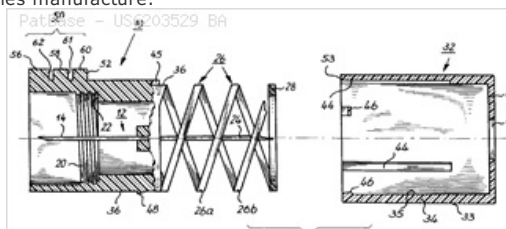
© PatBase

Title: NEEDLE ARRANGEMENT

Abstract: The invention concerns a needle arrangement for an injection device (16). It has a hollow needle carrier (10) on which a hollow needle (12) is mounted and which is configured for mounting on the injection device (16). The arrangement has a cap (32) which is displaceable on the hollow needle carrier (10) approximately parallel to the longitudinal extension of the hollow needle (12), is equipped at its proximal end segment with a passthrough opening (42) for the hollow needle (12), and in its proximal end position substantially conceals the hollow needle (12). A compression spring (26) is arranged between the hollow needle carrier (10) and cap (32) in order to displace the cap (32) into its proximal end position. Also provided is a covering cap (66) which surrounds the displaceable cap (32), the hollow needle (12), and the hollow needle carrier (10), and is sealed on its open side by a sealing member (71) that is removable by the user. A needle arrangement of this kind can easily be replaced after an injection. It improves compliance because the patient does not at any time see the hollow needle (12). The compression spring can be configured as a plastic spring (26). It is preferably integral with the hollow needle carrier (10), which simplifies manufacture.

Classifications:**International (IPC 8-9):** A61M5/00 A61M5/20 A61M5/31 A61M5/32 A61M5/46**International (IPC 1-7):** A61M5/00 A61M5/31 A61M5/32 A61M5/46**CPC:** A61M2005/3104 A61M2005/3267 A61M2205/59 A61M5/002

A61M5/3202 A61M5/326 A61M5/3271 A61M5/46

US: 604/192 604/198 604/263**Family:**

Publication number	Publication date	Application number	Application date
AT265873 E	20040515	AT19980962331T	19981111

CA2314089 AA	20000518	CA19982314089	19981111
CA2314089 C	20060221	CA19982314089	19981111
DE29820166 U1	19990506	DE19982020166U	19981111
DE29825212 U1	20060420	DE19982025212U	19981111
DE59811344 D1	20040609	DE19985011344T	19981111
DK1032446 T3	20040614	DK19980962331T	19981111
EP1032446 A1	20000906	EP19980962331	19981111
EP1032446 B1	20040506	EP19980962331	19981111
EP1032446 B2	20131127	EP19980962331	19981111
JP2001523485 T2	20011127	JP20000520835T	19981111
US6203529 BA	20010320	US20000530894	20000504
WO9925402 A1	19990527	WO1998EP07230	19981111

Priority:

DE19972020513U 19971119 WO1998EP07230 19981111 DE19982020166U 19981111
DE19982025212U 19981111 DE19985011344T 19981111

Probable Assignee: SANOFI SA

Assignee(s): (std): B D MEDICO ; B D MEDICO GMBH ; B D MEDICO S A R L ; GABRIEL JOCHEN ; HASELMEIER S A R L ; MEDICO DEV INVESTMENT CO ; POLZIN ULF ; SANOFI AVENTIS DEUTSCHLAND

Assignee(s): B D MEDICO S A R L MIES ; HASELMEIER GMBH ; HASELMEIER S A R L MIES ; HASEMEIER SARL ; MEDICO DEVELOPMENT INVESTMENT CO ; MEDICO DEVELOPMENT INVESTMENT CO ASCONA CH ; MEDICO DEVELOPMENT INVESTMENT COMPANY ; SANOFI AVENTIS DEUTSCHLAND GMBH ; SANOFI SA

Inventor(s): (std): GABRIEL JOCHEN ; POLZIN ULF

Inventor(s): JOCHEN GABRIEL ; ULF POLZIN

Agent(s): GOWLING LAFLEUR HENDERSON LLP; KATO ASAMICHI; KEIL AND SCHAAFHAUSEN PATENTANWAELTE; MILTON OLIVER; WARE FRESSOLA VAN D SLUYS AND ADOLPHSON LLP

Designated states: AT BE CA CH CY DE DK ES FI FR GB GR IE IT JP LI LU MC NL PT SE US

3) Family number: 29749413 (US6581648 BA)

© PatBase

Title: METHOD AND APPARATUS FOR OPERATING A SYRINGE AND VIAL FOR INJECTIONS

Abstract: A device for aligning a vial and a syringe used for medical injections. The device includes a vial alignment portion and a syringe alignment portion, both aligned on an alignment axis extending between the two portions. The alignment portions can restrict motion of both the vial and the syringe transverse to the alignment axis so as to maintain a needle of the syringe aligned with an access port of the vial. The device can also include provisions for removing a protective cap from the vial and for removing a protective cover from the syringe needle. The syringe and the vial can be packaged in a container which can also be used to align the syringe with the vial.

Classifications:

International (ipc 8-9): A61J1/00 A61J1/14 A61J1/20 A61M5/00

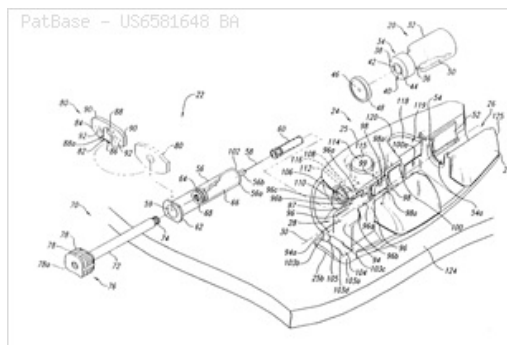
A61M5/178 A61M5/31 A61M5/315 A61M5/32

International (ipc 1-7): A61M5/178 B65B1/04

CPC: A61J1/201 A61J1/2055 A61J1/2096 A61M2005/3139

A61M2205/585 A61M5/002 A61M5/1782 A61M5/31511 A61M5/3213

US: 141/2 141/27 141/329 604/414



Family:

Publication number	Publication date	Application number	Application date
AU199965134 A1	20000522	AU19990065134	19991008
AU199965134 A5	20000522	AU19990065134	19991008
CA2349382 AA	20010430	CA19992349382	19991008
CA2349382 C	20071211	CA19992349382	19991008
US6581648 BA	20030624	US20010830791	20010914
WO0025846 A2	20000511	WO1999US23594	19991008
WO0025846 A3	20000824	WO1999US23594	19991008

Priority:

US19980106435P 19981030 WO1999US23594 19991008 US20010830791 20010914

Probable Assignee: IMMUNEX CORP

Assignee(s): (std): BODE ROBERT L ; COLEMAN W CARL ; IMMUNEX CORP ; LUCIANO ROBERT C

Assignee(s): COLEMAN W ; IMMUNEX CORPORATION ; ZOENTROFF WILLIAM CARLETON

Inventor(s): (std): BODE ROBERT L ; COLEMAN W CARL ; LUCIANO ROBERT C ; ZOENTROFF WILLIAM CARLETON

Inventor(s): COLEMAN W ; ROBERT C LUCIANO ; ROBERT L BODE ; W CARL COLEMAN ; WILLIAM CARLETON ZOENTROFF

Agent(s): DRINKER BIDDLE AND REATH LLP; MCCARTHY TETRAULT LLP

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

Title: Safety sleeve for dental syringe

Abstract: This invention relates to a safety dental syringe which before and after use protects the needle from exposure. More particularly, this invention pertains to a safety sleeve for a conventional dental syringe wherein after the syringe is used, an overlying sleeve surrounding the barrel of the syringe is extended so that the exposed used needle of the syringe is shielded by the sleeve. The invention pertains to a needle and sleeve assembly useful for use in association with a dental syringe comprising a hollow barrel, a piston, and an anaesthetic ampule cavity therein, comprising: a hollow elongated sleeve having openings at each end thereof; and a hollow housing base which supports at one end thereof an injection needle, and at the other end thereof, an ampule penetrating needle, the exterior of the housing base being adapted to slidably engage with the hollow interior of the sleeve.

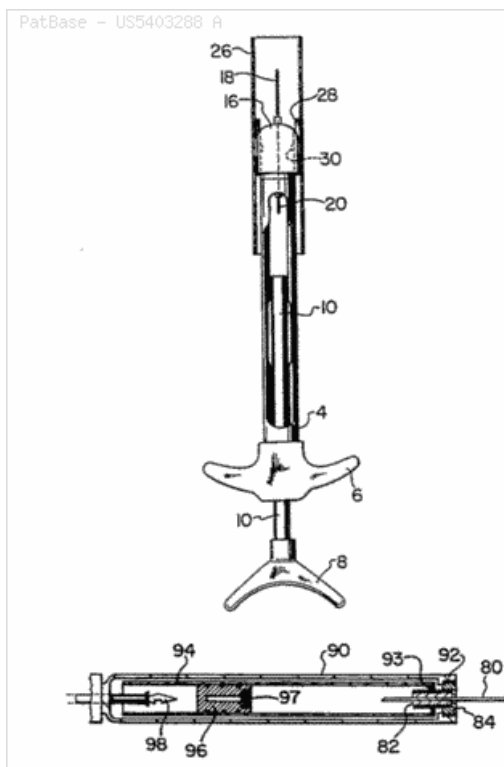
Classifications:

International (IPC 8-9): A61M5/24 A61M5/31 A61M5/315 A61M5/32 A61M5/34

International (IPC 1-7): A61M5/00

CPC: A61M2005/3109 A61M2005/3231 A61M5/24 A61M5/31511 A61M5/3202 A61M5/3213 A61M5/322 A61M5/3271 A61M5/3272 A61M5/347

US: 604/110 604/192 604/197 604/228 604/232 604/240 604/241



Family:

Publication number	Publication date	Application number	Application date
US5403288 A	19950404	US19920834854	19920213
US5593391 A	19970114	US19950414736	19950331

Priority:

US19920834854 19920213 US19950414736 19950331

Probable Assignee: STANNERS SYDNEY D

Assignee(s): (std): STANNERS SYDNEY D

Inventor(s): (std): STANNERS SYDNEY D

Title: Self-capping syringe

Abstract: A self-capping syringe is provided, which consists of a barrel having a first end and a second end. A finger flange is on the first end and a needle hub is on the second end of the barrel. A plunger slides within the barrel and extends from the finger flange, while a thumb rest is on an outer end of the plunger. A needle extends axially outward from the needle hub on the second end of the barrel. A protective cap is also provided. A mechanism is for allowing the protective cap to twist upon the barrel from a retracted position that exposes the needle to an extended position which covers the needle. A structure is for locking the protective cap in the extended position after use, so as to prevent an accidental needle stick before disposal.

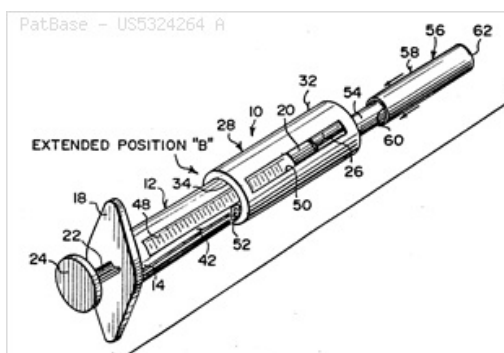
Classifications:

International (IPC 8-9): A61M5/32

International (IPC 1-7): A61M5/00 A61M5/32

CPC: A61M5/3271

US: 604/110 604/111 604/198



Family:

Publication number	Publication date	Application number	Application date
CA2118626 AA	19941224	CA19942118626	19940309
CA2118626 C	19990921	CA19942118626	19940309
US5324264 A	19940628	US19930079924	19930623

Priority:

US19930079924 19930623 CA19942118626 19940309

Probable Assignee: WHITAKER JOSEPH

Assignee(s): (std): WHITAKER JOSEPH

Inventor(s): (std): WHITAKER JOSEPH

Agent(s): MCFADDEN FINCHAM; OSLER HOSKIN AND HARCOURT LLP

6) Family number: 19098214 (GB558474 A)

© PatBase

Title: Improvements in and relating to collapsable tubes or containers

Abstract: 9230. [Class 81 (ii)] [Also in Group XVII] A collapsable tube for effecting hypodermic or like injections is provided with a hollow needle 3 engaged in a recess in the end of the neck portion 2, the tube being closed by a diaphragm 4 integral with the neck and adapted to be punctured by a stile or pricker passed through the needle. A screw-threaded or frictionfitting cap 12 is provided.

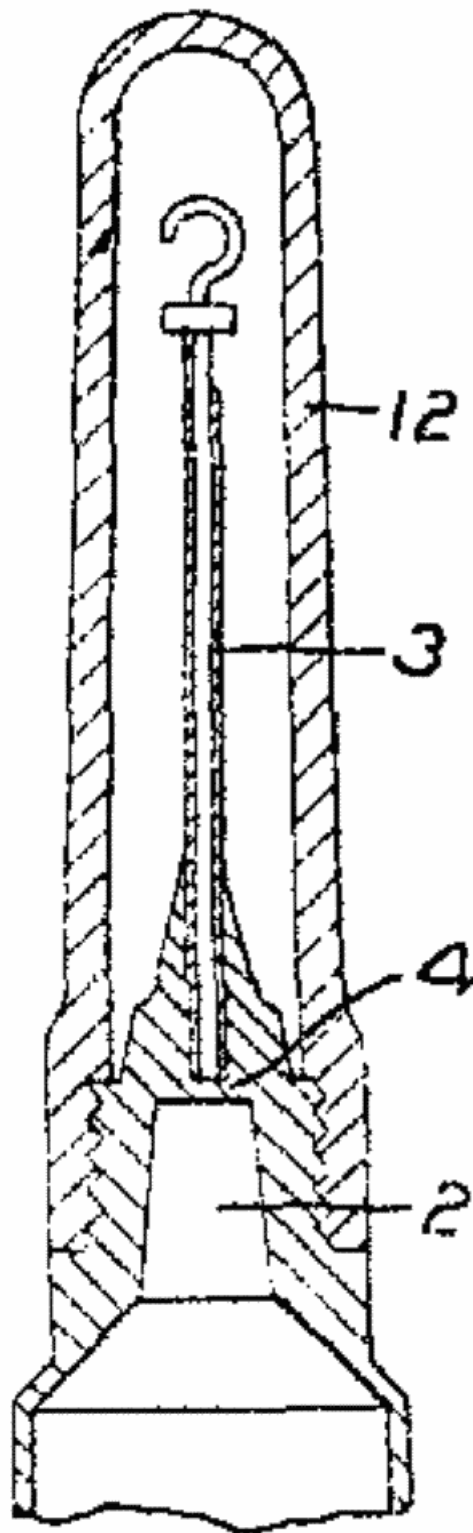
Classifications:

International (IPC 8-9): A61M5/28 A61M5/31

International (IPC 1-7): A61M5/28

CPC: A61M2005/311 A61M5/28

FIG. 4.

**Family:**

Publication number	Publication date	Application number	Application date
GB558474 A	19440106	GB19420009230	19420703

Priority:

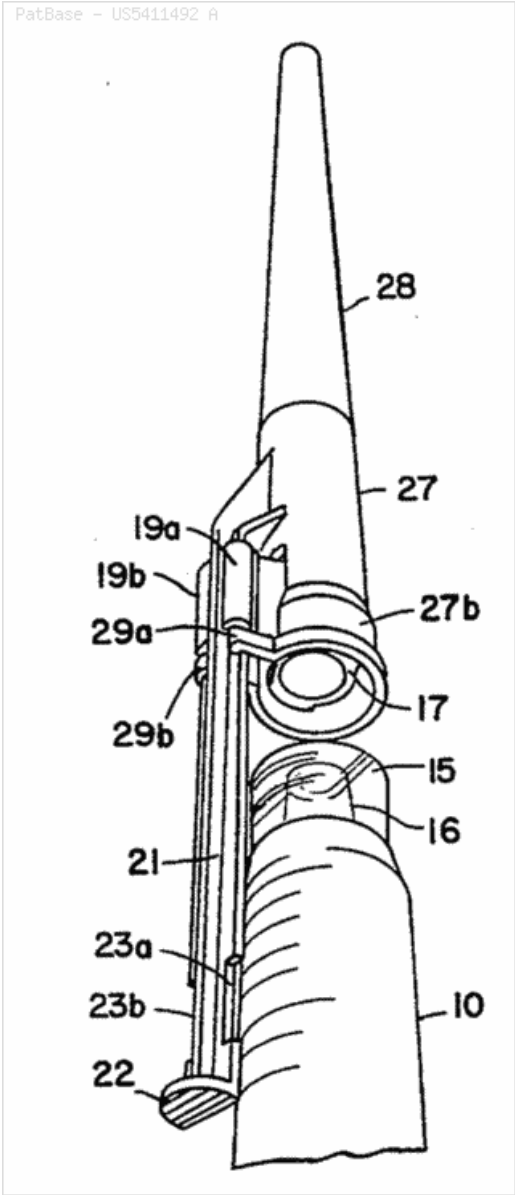
GB19420009230 19420703

Probable Assignee: SURGICAL EQUIPMENT SUPPLIES LT**Assignee(s):** (std) RUDOLPH BACH ; SURGICAL EQUIPMENT SUPPLIES LT**Assignee(s):** SURGICAL EQUIPMENT SUPPLIES LIMITED ; SURGICAL EQUIPMENT SUPPLIES LTD

Abstract: A safety hypodermic needle and shielding cap assembly attachable to a standard syringe adapted to prevent the needle after it has been injected in a patient and then withdrawn, from accidental sticking the operator. The syringe includes a fluid chamber provided at its front end with a projecting nozzle surrounded by a cylindrical socket. The assembly includes a hollow hub receivable in the syringe socket and a needle mounted on the hub and extending along its longitudinal axis whereby the nozzle projects into the hub to deliver fluid to the needle. Mounted adjacent one side of the hub is a short track on which is slidable a flexible push rod on whose upper end is laterally attached a shielding cap having a center bore in alignment with the needle. In the operating mode of the assembly, the push rod is retracted and the cap is then telescoped on the hub to expose the needle for injection into a patient. In the shielding mode of the assembly, in effect after the needle is withdrawn from a patient, the push rod is extended by the operator to raise the cap bore above the tip of the needle whereby the cap then shields the tip. Should pressure be applied accidentally to the shielding cap seeking to force it toward the needle, the cap which is cantilevered from the track by the flexible rod will then swing to an offset position in which the bore is out of line with the needle tip.

Classifications:

International (IPC 8-9): A61M5/32
International (IPC 1-7): A61M5/32
CPC: A61M2005/3247 A61M2005/3249 A61M5/3202 A61M5/3269 Y10S128/919
US: 128/919 604/198 604/263



Family:

Publication number	Publication date	Application number	Application date
US5411492 A	19950502	US19940270677	19940705

Priority:

US19940270677 19940705

Probable Assignee: MAURICE S KANBAR REVOCABLE TRUST

Assignee(s): COHN ROBERT J ; KANBAR MAURICE ; KOLVITES ALBERT ; MAURICE S KANBAR REVOCABLE TRUST ; STURMAN MARTIN

Inventor(s): (std): COHN ROBERT J ; KANBAR MAURICE ; KOLVITES ALBERT ; STURMAN MARTIN

8) Family number: 12787010 (US5558648 A)

© PatBase

Title: Disposable conical hold for a medicinal cartridge with reusable plunger and shields

Abstract: A disposable hollow cylindroid in the form of a cone which wedge impacts an inserted piston-activated medicinal cartridge such that, employing one or two hands, the user can safely aspirate tissue fluid from a patient and inject contained fluid medications via a hollow needle. The leading end of this disposable hollow cylindroid comprises means for stabilizing the hollow needle serving the inserted cartridge. The trailing end is fitted with a separate reusable plunger whose leading end reversibly attaches to the trailing end of the cartridge piston. In operation, the user inserts the cartridge, uses a leading

cylindrical cap on the plunger to wedge-impact the cartridge into the cone, attaches the plunger, screws the leading end of the plunger onto the trailing end of the cartridge piston, removes a sheathing cover from the hollow needle, aspirates into or injects fluid from the inserted cartridge, unscrews and extracts the plunger and, finally, discards the hollow cylindroid containing the cartridge and hollow needle into a safe container. An auxiliary shielding system is described to sterile-protect the cartridge before insertion and exposed sharp parts of the hollow needle after use in a patient.

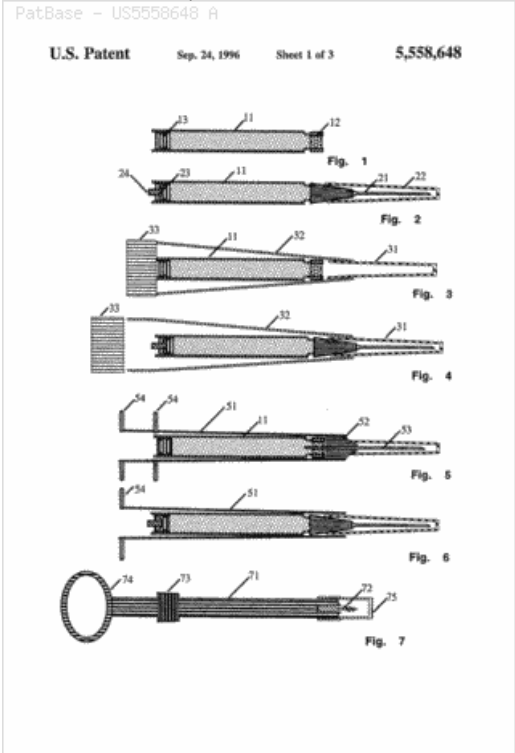
Classifications:

International (IPC 8-9): A61M5/24 A61M5/32

International (IPC 1-7): A61M5/32

CPC: A61M2005/2407 A61M5/24 A61M5/3243

US: 604/192 604/198 604/232



Family:

Publication number	Publication date	Application number	Application date
US5558648 A	19960924	US19950370465	19950109

Priority:

US19940224902 19940408 US19950370465 19950109

Probable Assignee: SHIELDS JACK W

Assignee(s): (std): SHIELDS JACK W

Inventor(s): (std): SHIELDS JACK W

9) Family number: 53575227 (US2015359710 AA)

© PatBase

Title: MEDICINAL CEFOXITIN VIAL, AND DISPENSING APPARATUS AND INJECTION APPARATUS THEREOF

Abstract: A medicinal xiding vial, and a dispensing apparatus and an injection apparatus thereof, comprise a reversely pressed medicinal xiding vial, a reversely pressed dispensing apparatus and a reversely pressed injection apparatus thereof, a general medicinal xiding vial, and a general injection apparatus. The reversely pressed medicinal xiding vial comprises a vial body whose inner wall is a straight cylinder. A first piston is disposed on a position close to the vial opening of the vial body. A blind hole is disposed at the center of an outer bottom surface of the first piston. The vial opening is provided with an outer edge, and a seal cap is fixed on the out edge to prevent the first piston from falling off. In combination with the dispensing apparatus and the injection apparatus thereof, the medicinal xiding vial can solve the problem of secondary pollution during medicine dispensing and injection.

Classifications:

International (IPC 8-9): A61J1/05 A61J1/06 A61J1/14 A61J1/20 A61M5/178 A61M5/24 A61M5/315

CPC: A61J1/1412 A61J1/1425 A61J1/20 A61J1/2003 A61J1/201 A61J1/2013 A61J1/2096 A61M5/2429 A61M5/2448 A61M5/31511

US: 604/201 604/412

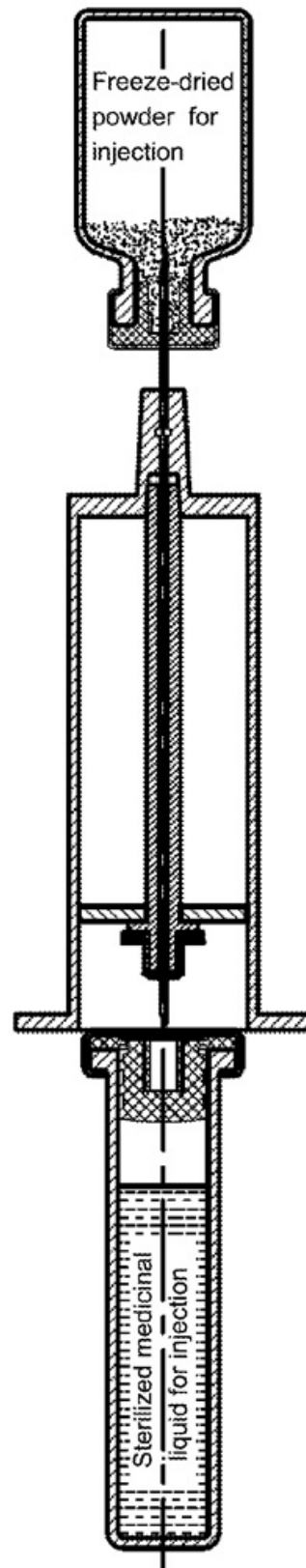


FIG.10

Family:

Publication number	Publication date	Application number	Application date
BR112015018468 A2	20170718	BR20151118468	20140125
CN103055382 A	20130424	CN201310039075	20130131
CN103055382 B	20140827	CN201310039075	20130131
CN103505366 A	20140115	CN201310471655	20131010
CN203107875 U	20130807	CN201320063639U	20130131

DE602014027553 D1	20140126	CN2013200624875U	20131010
EP2952217 A1	20151209	EP20140745789	20140125
EP2952217 A4	20170104	EP20140745789	20140125
EP2952217 B1	20180627	EP20140745789	20140125
EP3284495 A1	20180221	EP20170190619	20140125
IN06734DN2015 A	20160715	IN2015DN06734	20150730
JP2016508773 A2	20160324	JP20150555573	20140125
JP2016508773 T2	20160324	JP20150555573T	20140125
US10188584 BB	20190129	US20140765310	20140125
US2015359710 AA	20151217	US20140765310	20140125
WO14117691 A1	20140807	WO2014CN071442	20140125

Priority:

CN201310039075 20130131 CN201320063639U 20130131 CN201310471655 20131010
CN201320624875U 20131010 WO2014CN071442 20140125 EP20140745789 20140125

Probable Assignee: DING XI XI AN

Assignee(s): (std): DING XI ; DING YILING ; XI DING ; YILING DING

Assignee(s): DING XI XI AN ; DING YILING XI AN

Inventor(s): (std): DING XI ; DING YILING ; XI DING ; YILING DING

Inventor(s): DING XI XI AN ; DING YILING XI AN

Agent(s): LEE SANG HO; LEFFERS THOMAS; NOVICK KIM AND LEE PLLC; SCHWEIGER AND PARTNERS;
SCHWEIGER MARTIN; XIAN RITON INTELLECTUAL PROPERTY ATTORNEYS

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

10) Family number: 20755523 (GB829373 A)

© PatBase

Title: Cylindrical ampoule with injection needle

Abstract: 829,373. Hypodermic injection appliances. FARBENFABRIKEN BAYER A.G. June 14, 1957 [June 25, 1956], No. 18882/57. Class 81 (2). A hypodermic injection device comprises a cylindrical ampoule 2 with a piston closure 3 and an injection needle 9 having a protective sheath 8 with a flanged end 14, the end of the needle having a flanged attachment adjacent the ampoule and a cap 4 securing the flanged ends 13, 14 of the attachment 5 and the sheath 8 to the ampoule 2. The neck of the ampoule 2 has a plug 6 through which the needle 9 passes. The cap 4 is flanged around a beaded lip 15 of the neck of the ampoule 2. A synthetic plastic holder 1 for the ampoule 2 and a plunger 7 which removably covers the needle 9 and the sheath 8, are screwed on the cap 4. In use the plunger 7 is detached from the cap 4 and screwed on a boss 3a on the piston closure 3. Clogging of the needle is prevented by a stylet 10. As the sheath 8 is removed the stylet 10 is simultaneously withdrawn, a bent part of the stylet 10, which projects from the needle, engaging a bead 16 in the sheath 8.

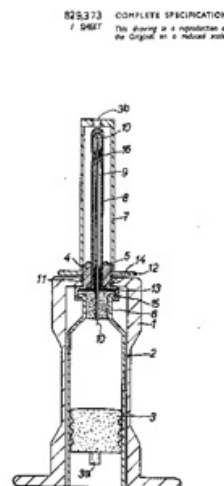
Classifications:

International (IPC 8-9): A61M5/28

International (IPC 1-7): A61M5/28

CPC: A61M5/28

PatBase - GB829373 A



Family:

Publication number	Publication date	Application number	Application date
GB829373 A	19600302	GB19570018882	19570614

Probable Assignee: BAYER AG

Assignee(s): (std): BAYER AG

Assignee(s): FARBENFABRIKEN BAYER AKTIENGESELLSCHAFT

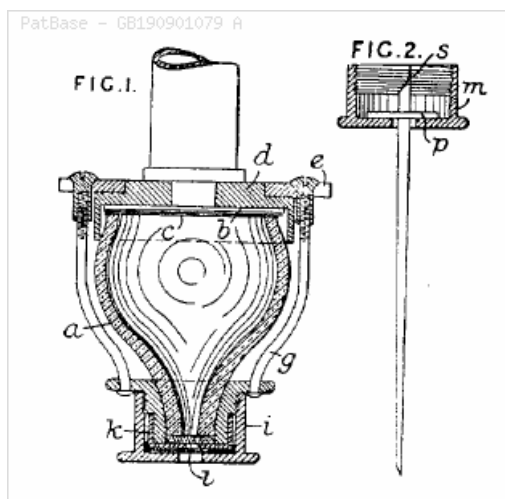
Title: An Improved Injection Syringe.

Abstract: 1079. Schwarz, F., and Tauss, H. Jan. 15. Syringes.-An injection syringe a is closed at the top by a flexible rubber diaphragm b which may be protected by a sheet c of tin-foil. The diaphragm is held in place by a hard rubber cover d and a metal ring c connected by screwbolts g with a casing i fitting over the lower end of the container. The smaller orifice of the syringe is closed by a small durite plate l held in place by a cap k, the whole being secured by a cap m. which engages with a screw thread on the casing i. The injecting-needle is formed with a short point s, which is pushed through the durite plate l, and is held in place by the cap m engaging the flange p. The contents are ejected by distending the diaphragm b by any suitable air-forcing means attached to the cover d.

Classifications:

International (IPC 8-9): A61M5/31

CPC: A61M5/31



Family:

Publication number	Publication date	Application number	Application date
GB190901079 A	19100117		00000000

Probable Assignee: SCHWARZ FRIEDRICH
Assignee(s): (std): SCHWARZ FRIEDRICH ; TAUSS HEINRICH
Assignee(s): FRIEDRICH SCHWARZ ; HEINRICH TAUSS
Inventor(s): (std): SCHWARZ FRIEDRICH ; TAUSS HEINRICH
Inventor(s): FRIEDRICH SCHWARZ ; HEINRICH TAUSS

Title: HYPODERMIC SYRINGE - HAVING NEEDLE COVER WHICH SERVES AS PLUNGER ROD

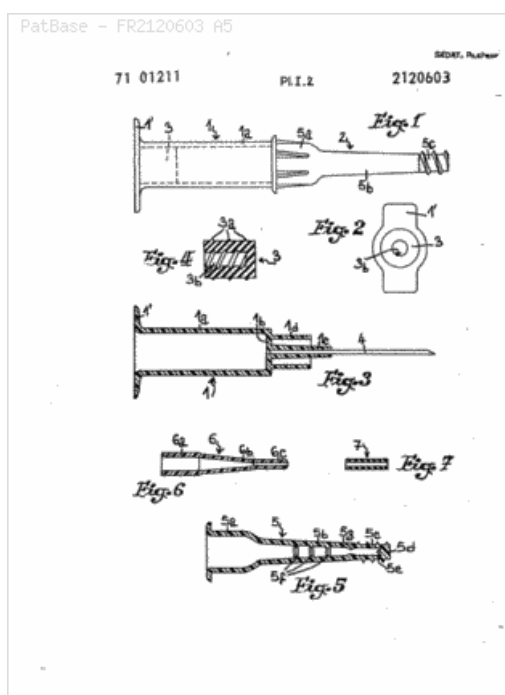
Abstract: The needle cover is hollow and is of frustoconical shape, and the narrow end is sealed and is provided with an outer screw thread for securing the cover to the syringe plunger to act as a push rod, while the larger end is flared so that it fits over the end of the syringe cylinder with the needle extending into the bore of the cover. A loose rubber tube is retained in the small diameter and of the cover by pref. an inner annular rib and is pref. centered by an inner projection on the closed end, and the needle tip extends into the tube and is prevented from contacting the inner wall of the lever. Damage to the needle and lever is prevented.

Classifications:

International (IPC 8-9): A61M5/28 A61M5/315 A61M5/32

International (IPC 1-7): A61M5/00 A61M5/28

CPC: A61M5/28 A61M5/31511 A61M5/3202



Family:

Publication number	Publication date	Application number	Application date
--------------------	------------------	--------------------	------------------

Priority:
 FR19710001211 19710108
Probable Assignee: PASTEUR INST
Assignee(s): (std): PASTEUR INST ; PASTEUR INSTITUT ; SEDAT

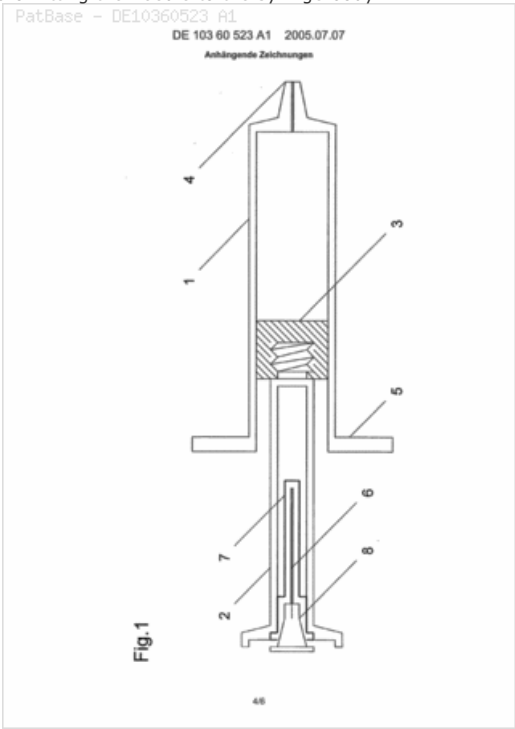
13) Family number: 32061239 (DE10360523 A1)

© PatBase

Title: COMPLETE MEDICAL INJECTION UNIT, COMPRISES SYRINGE WITH HOLLOW PISTON ROD CONTAINING NEEDLE, TOGETHER WITH ITS PROTECTION CAP

Abstract: The piston rod is constructed as a hollow cylindrical tube (2). Inside it, an injection needle is held, complete with its protection cap (7). An independent claim is included for the method of fitting the needle to the syringe body.

Classifications:
International (IPC 8-9): A61M5/315 A61M5/32
International (IPC 1-7): A61M5/31 A61M5/32
CPC: A61M5/31511 A61M5/3202



Publication number	Publication date	Application number	Application date
DE10360523 A1	20050707	DE20031060523	20031222

Priority:
 DE20031060523 20031222
Probable Assignee: BAUER SIEGFRIED
Assignee(s): (std): BAUER SIEGFRIED

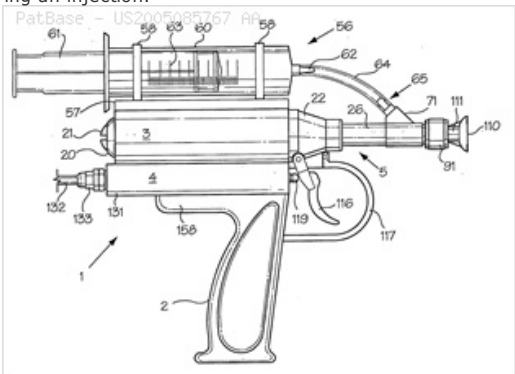
14) Family number: 28998322 (US2005085767 AA)

© PatBase

Title: NEEDLELESS INJECTOR

Abstract: A needleless injector includes a barrel (5) for receiving an injectable liquid a nozzle (82) closing one end of the barrel (5) containing an injection orifice; a plunger (46) movable in the barrel (5) for forcing liquid out of the barrel (5); a piston (6); in the barrel (5) for forcing liquid out of the barrel (5); a piston (6) in the barrel (5) for movement under gas pressure to move the plunger (46); a valve (118) for admitting gas under pressure into the barrel (5) behind the piston (6); a trigger (116) for opening the valve (118) to cause said piston (6) to move against the plunger (46); and a magnet (10) for retaining the piston (6) in a rest position in said barrel (5) until acted upon by a gas under sufficient pressure to cause the piston (6) and plunger (46) to move to an extended, discharge position. For extra protection a sterile pad can be disposed between the injection orifice and the skin of a person or animal receiving an injection.

Classifications:
International (IPC 8-9): A61M5/20 A61M5/30 A61M5/307 A61M5/31 A61M5/32 A61M5/34 A61M5/48
International (IPC 1-7): A61M5/30 A61M5/307 A61M5/31
CPC: A61M5/204 A61M5/2053 A61M5/30 A61M5/3007 A61M5/32 A61M5/347 A61M5/482 A61M5/488
US: 604/68 604/68P 604/70



Family:

Publication number	Publication date	Application number	Application date
AT345829 E	20061215	AT20030700737T	20030122
AU2003202340 AA	20030904	AU20030202340	20030122
CA2371466 AA	20030812	CA20022371466	20020212
CA2371466 C	20100209	CA20022371466	20020212
DE60309835 D1	20070104	DE20036009835T	20030122
EP1474192 A2	20041110	EP20030700737	20030122
EP1474192 B1	20061122	EP20030700737	20030122
JP2005516739 T2	20050609	JP20030567476T	20030122
JP4309285 B2	20090805	JP20030567476T	20030122
US2005085767 AA	20050421	US20030503915	20030122
US7357781 BB	20080415	US20030503915	20030122
WO03068296 A2	20030821	WO2003CA00068	20030122
WO03068296 A3	20031016	WO2003CA00068	20030122

Priority:

CA20022371466 20020212 CA20022371466 20020215 WO2003CA00068 20030122

Probable Assignee: MEDICAL INT TECHNOLOGIES MIT CANADA INC

Assignee(s): (std): MEDICAL INT TECHNOLOGY MI ; MEDICAL INTERNAT TECHNOLOGY MI ; MENASSA KARIM

Assignee(s): MEDICAL INT ; MEDICAL INT TECHNOLOGIES (MIT CANADA) INC ; MEDICAL INT TECHNOLOGIES MIT CANADA INC ; MEDICAL INT TECHNOLOGY INC ; MEDICAL INT TECHNOLOGY MIT INC ; MEDICAL INTERNATIONAL TECHNOLOGY MIT INC

Inventor(s): (std): MENASSA KARIM

Inventor(s): KARIM MENASSA

Agent(s): CASSAN MACLEAN IP AGENCY INC ; GEORGE A ; GEORGE A SEABY SEABY AND ASSOCIATES ; SEABY AND ASSOCIATES ; SEABY GEORGE A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE 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 LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

15) Family number: 32089511 (ES2234356 AA)

© PatBase

Title: PATHOGENS ELIMINATION EQUIPMENT MDE OF NON PERFORATABLE MATERIAL INCLUDES A HANDS PROTECTOR, A SEALABLE CONTAINER AND A GUIDE SYSTEM FOR CONTROLLED NEUTRALISATION ; PATHOGENS ELIMINATION EQUIPMENT MDE OF NON PERFORATABLE MATERIAL INCLUDES A HANDS PROTECTOR, A SEALABLE CONTAINER AND A GUIDE SYSTEM FOR CONTROLLED NEUTRALISATION

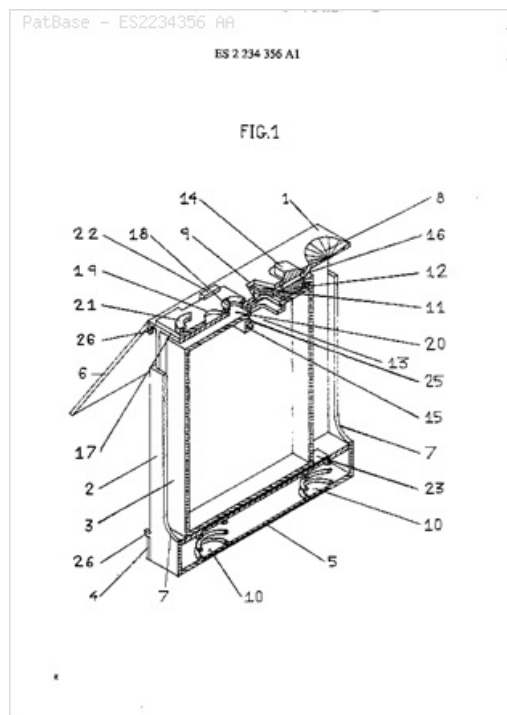
Abstract: The pathogens elimination equipment made of non-perforatable material has a hands protector and a sealable container, in a guide system with two access and viewing holes. Transport, storage and processing are facilitated, with neutralisation and obviation of the need for inoculation.

Classifications:

International (IPC 8-9): A61M5/32

International (IPC 1-7): A61M5/32

CPC: A61B50/362 A61M5/3205

**Family:**

Publication number	Publication date	Application number	Application date
ES2234356 AA	20050616	ES20020001475	20020618
ES2234356 BA	20061016	ES20020001475	20020618

Priority:

ES20020001475 20020618

Probable Assignee: BOTELLA SANTAMARIA MIGUEL

Assignee(s): (std): BOTELLA SANTAMARIA MIGUEL ; GRIMA AGUDO FRANCISCO J
Inventor(s): (std): BOTELLA SANTAMARIA MIGUEL ; GRIMA AGUDO FRANCISCO J

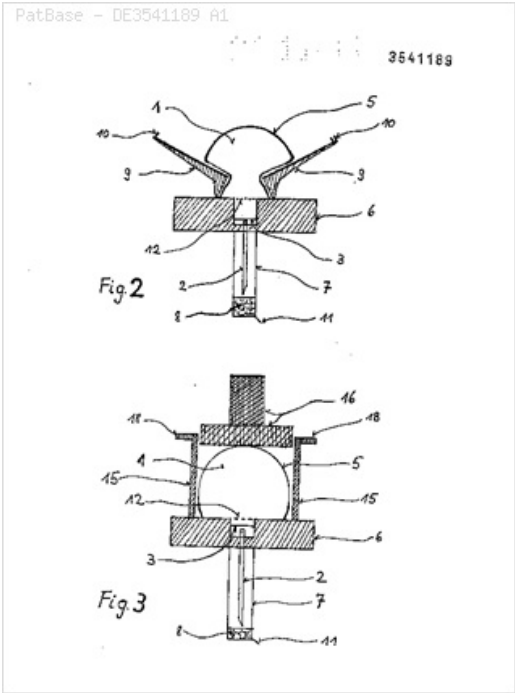
16) Family number: 2110186 (DE3541189 A1)

© PatBase

Title: Device for the injection of ready-prepared, measured liquids

Abstract: Device for the injection of ready-prepare, measured liquids which comprises all the parts necessary for injection, the liquid present in the cavity 1 being emptied on opening of the closure 3 due to the action of pressure or by traction on a thread passing through the cavity 1 after puncturing of the tissue by the cannula, which results in a composition of the system such that it consists of the liquid-filled cavity 1 closed with a membrane or small plate, and of the base plate 6 carrying the cannula and having the detachable, two-chambered flap attached thereto, which protects the cannula in one chamber and accommodates a body impregnated with agents for disinfection and colour marking of the injection site in the other chamber.

Classifications:
International (IPC 8-9): A61M5/28 A61M5/32
International (IPC 1-7): A61M5/28
CPC: A61M5/001 A61M5/282 A61M5/32



Family:

Publication number	Publication date	Application number	Application date
DE3541189 A1	19870527	DE19853541189	19851121
GB8606136 A0	19860416	GB19860006136	19860312

Priority:

DE19853541189 19851121

Probable Assignee: WOERNER OTTO

Assignee(s): (std): WOERNER OTTO ; WOERNER OTTO DR MED ; WORNER O

Inventor(s): (std): WOERNER OTTO DR MED

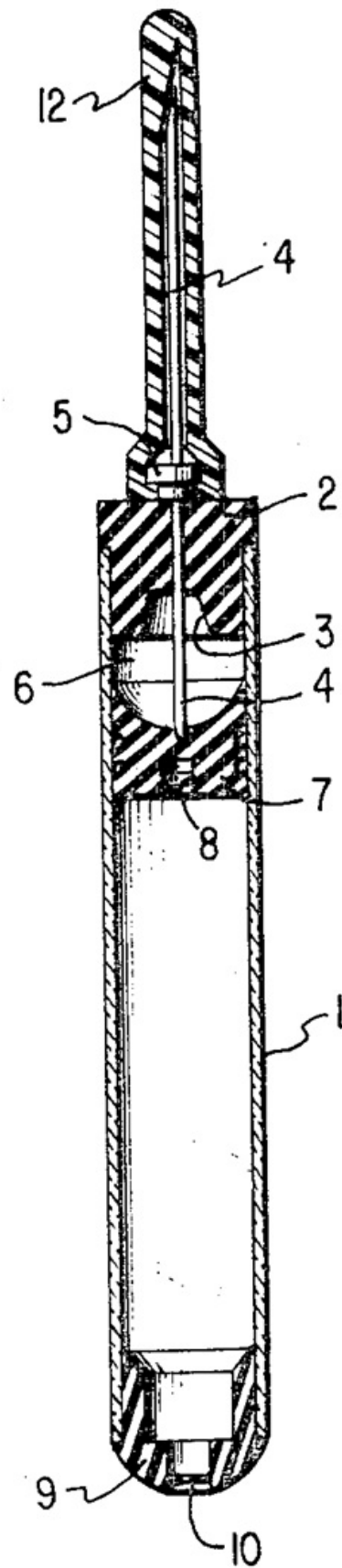
17) Family number: 344949 (US3645253 A)

© PatBase

Title: INSTRUMENT FOR THE WITHDRAWAL OF BODY FLUIDS

Abstract: An improved syringe for the withdrawal of body fluids, especially adapted for transport and storage as well as for the centrifugation of the fluid samples, preferably blood samples, comprises a tube having a hermetically end, the closure of which, being a stopper or cap, is entirely or partly made of resilient material, through which a needle, preferably of stainless steel, extends, which ends in or is tightly pressured against a piston mounted in the tube. Said piston is preferably provided with a concave at the side where the needle ends. Thus a hermetically sealed compartment is obtained through which the needle extends. Said Compartment is suitable for aseptic storage of auxiliaries such as anticoagulants and/or antiseptics.

Classifications:
International (IPC 8-9): A61B5/15 A61B5/154
International (IPC 1-7): A61B10/00 A61B5/00 A61B5/14 A61M5/00
CPC: A61B5/15003 A61B5/150236 A61B5/150244 A61B5/150251
A61B5/150351 A61B5/150389 A61B5/150496 A61B5/150595
A61B5/150717 A61B5/150755 A61B5/153 B01L3/50825
US: 128/276 128/2F 600/578 604/228



Family:

Publication number	Publication date	Application number	Application date
DE1956953 A1	19700611	DE19691956953	19691112
FR2023100 A1	19700807	FR19690038766	19691112
GB1282763 A	19720726	GB19690052944	19691029
JP50014834 B4	19750530	JP19690090214	19691112
NL6816121 A	19700514	NL19680016121	19681112
US3645253 A	19720229	US19690873903	19691104

Priority:

NL19680016121 19681112

Probable Assignee: ORGANON LABOR LTD

Assignee(s): (std): ORGANON ; ORGANON LABOR LTD ; ORGANON NV

Assignee(s): N V ORGANON ; ORGANON INC ; ORGANON LABORATORIES LIMITED ; ORGANON LABORATORIES LTD

Inventor(s): (std): CORNELIS GOVERDE BASTIAAN ; DROST RIJKENT HENDRIK ; GOVERDE BASTIAAN CORNELIS ; HENDRIK DROST RIJKENT ; LOUWERENS BERNARDUS

Inventor(s): BASTIAAN CORNELIS GOVERDE ; BERNARDUS LOUWERENS ; RIJKENT HENDRIK DROST

18) Family number: 20789542 (GB981009 A)

© PatBase

Title: Improvements relating to hypodermic needles

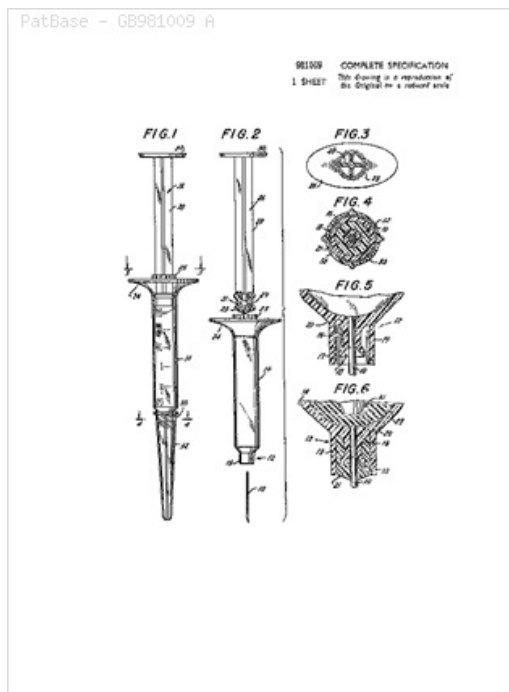
Abstract: 981,009. Hypodermic syringes. B. D. LABORATORIES Inc. Dec. 9, 1963, No. 48536/63 Heading A5R. A hypodermic needle assembly comprises metal needle 10, the butt end of which is inserted in thermoplastic mounting 12 comprising chuck 16 for embracing the needle and skirt 19. The annular space between the chuck 16 and skirt 19 is filled with, e.g. epoxy resin 21. The outer surface of the chuck or the inner surface of the skirt is formed with a recess so that the epoxy resin engages in the recess and supports the needle against axial movement. Chuck 16 has flange 17 for facilitating entry of needle 10. The mount 12 may be formed separately or integrally with graduated syringe barrel 14. The barrel has flange 24 and collar 25 at the open end thereof into which is inserted piston 27 carried by piston-rod 28 of cruciform cross-section. The shape of piston 27 is complementary to the end of barrel 14 at the mount end so that, on applying pressure to flange 30, the piston expels all the contents from the barrel 14. A cap 32, which may have a helical thread 33 and reinforcing ribs, may cover the needle when not in use.

Classifications:

International (IPC 8-9): A61M5/34

International (IPC 1-7): A61M5/34

CPC: A61M5/348



Family:

Publication number	Publication date	Application number	Application date
GB981009 A	19650120	GB19630048536	19631209

Priority:

GB19630048536 19631209

Probable Assignee: B D LAB INC

Assignee(s): (std): B D LAB INC

Assignee(s): B D LABORATORIES INC

Inventor(s): (std): GOTTSCHALK WILLIAM HENRY

19) Family number: 3031203 (US4838875 A)

© PatBase

Title: Method and apparatus for dealing with intravenous fluids

Abstract: An apparatus is disclosed for intravenous administration of fluid to which fluid may be added according to the process also disclosed, by injecting same, using a syringe, but not a needle, directly into the hollow portion of the apparatus through an opening therein. A normally closed backflow check valve device, having a component thereof acting as a means for receiving the fluid by engagement to the syringe, has been permanently sealed into the opening in the hollow portion of the apparatus. The apparatus is capped by a double luer locking cap, the purpose of which is to protect the opening into the apparatus from contamination. This is accomplished by using a cap structure wherein the cap which will ultimately re-cover the opening is locked into and protected by the cap which initially covers the opening and then discarding this initial cap after the apparatus has been filled.

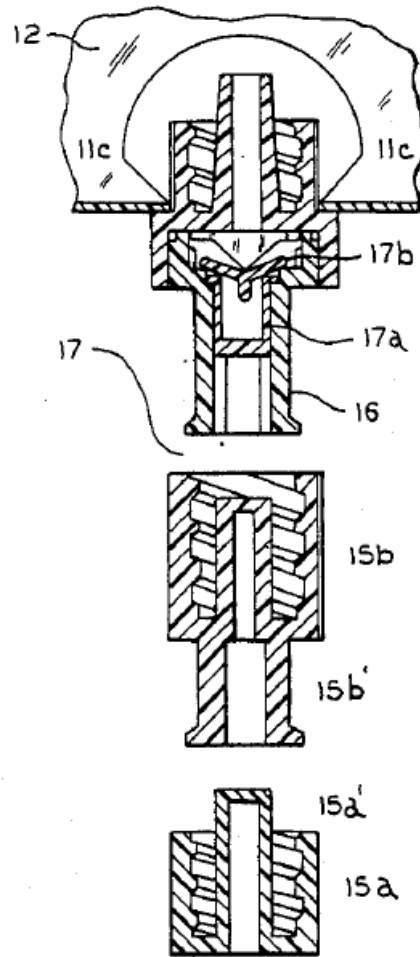
Classifications:

International (IPC 8-9): A61J1/05 A61J1/10 A61M39/00 A61M39/26

International (IPC 1-7): A61M5/00

CPC: A61J1/10 A61M39/26

US: 604/247 604/262 604/408

**Family:**

Publication number	Publication date	Application number	Application date
US4838875 A	19890613	US19870130442	19871209

Priority:

US19870130442 19871209

Probable Assignee:

SOMOR ANDREW T

Assignee(s): (std):

SOMOR ANDREW T

Inventor(s): (std):

SOMOR ANDREW T

20) Family number: 66270015 (US2017189270 AA)

© PatBase

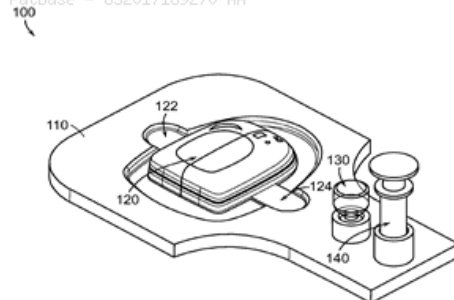
Title: FILLING ASSIST MECHANISMS AND KEYED INTERFACES FOR DRUG DELIVERY DEVICES

Abstract: Systems, components, and methods are disclosed for withdrawing drug from a liquid drug container and transferring drug to a medical device. One or more components may have keying features so that only the correct liquid drug container and medical device are accessed, making sure the medical device is filled with the correct drug. A syringe needle hub may have keying features corresponding to keying features on a cap on the liquid drug container and on the medical device. An alignment device facilitates easy-to-operate filling of a medical device. The alignment device aligns a liquid drug container over a fill port of the medical device and can include components for moving the liquid drug container into engagement with the medical device and for automatically initiating drug transfer to the medical device. A retractable skirt or needle cover protects the needle and is unlocked only when the skirt or needle cover is close to or touching the medical device.

Classifications:

International (IPC 8-9): A61J1/14 A61J1/20 A61M1/00 A61M31/00 A61M37/00 A61M5/00 A61M5/178 A61M5/31 A61M5/32
CPC: A61M2005/3109 A61M2005/3267 A61M2205/6045 A61M5/1782 A61M5/321
US: 1/1 604/415

PatBase - US2017189270 AA

**Family:**

Publication number	Publication date	Application number	Application date
--------------------	------------------	--------------------	------------------

EP3400051 A1	20181114	EP20170736272	20170104
EP3400051 A4	20190807	EP20170736272	20170104
US10661012 BB	20200526	US20170398657	20170104
US2017189270 AA	20170706	US20170398657	20170104
US2020254179 AA	20200813	US20200859544	20200427
WO17120251 A1	20170713	WO2017US12207	20170104

Priority:

US20160274445P 20160104 US20160276045P 20160107 US20160276020P 20160107
US20160275965P 20160107 US20160374311P 20160812 US20160378264P 20160823
US20160395498P 20160916 US20160407113P 20161012 WO2017US12207 20170104
US20170398657 20170104 US20200859544 20200427

Probable Assignee: INSULET CORP

Assignee(s): (std): INSULET CORP

Inventor(s): (std): ALLIS DANIEL P ; BARLETTA STEVEN ; CHOATE BRYAN ; CLARE DAVID ; DILLON BRYAN ; DOBRY RAYMOND ; GRAFFEO MICHAEL PHILIP ; JANSKY NICHOLAS ; LEFAVOUR JOHN ; MCCAFFREY MAUREEN ; MCLAUGHLIN IAN ; MCLAUGHLIN LAN ; NAZZARO DAVID ; RIOUX ROBERT F ; ROSENBLUM SAM ; SCHAEFER ROBERT D

Agent(s): RINGEL DOUGLAS E; VOSSIUS AND PARTNER PATENTANWALTE RECHTSANWALTE MBB

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

21) Family number: 50538836 (US2014221923 AA)

© PatBase

Title: SELF-DESTRUCTING SYRINGE WITH HIGH LEVEL OF SAFETY AND CONVENIENT ASSEMBLY

Abstract: Disclosed is a self-destructing syringe, comprising an outer casing, a core bar, a piston, a conical head component, a syringe needle and a protecting jacket. The syringe needle is fixed in the conical head component, and the conical head component consists of a threaded conical head, a sealing ring, a transition part and a hollow wedge. The protecting jacket is put around the syringe needle and is movably connected to the needle base of the syringe needle; the conical head component is fixed in the inner cavity at the front end of the outer casing; the piston is installed on the core bar; the main part of the core bar is sheathed inside the outer casing; and the front end of the core bar is inserted into the conical head component and is able to make the syringe needle return inside the outer casing.

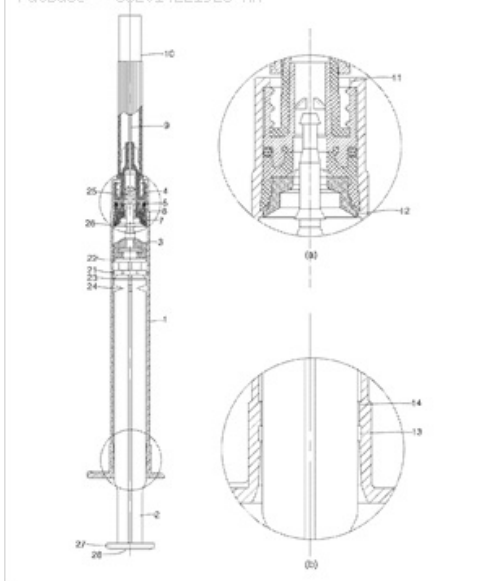
Classifications:

International (IPC 8-9): A61M5/31 A61M5/315 A61M5/32 A61M5/34 A61M5/50

CPC: A61M2005/323 A61M2005/5073 A61M5/3202 A61M5/3221 A61M5/3234 A61M5/50 A61M5/5066

US: 1/1 604/110

PatBase - US2014221923 AA



Family:

Publication number	Publication date	Application number	Application date
BR112014000638 A2	20170214	BR20141100638	20111117
BR112014000638 B1	20200915	BR20141100638	20111117
CN102327658 A	20120125	CN201110320499	20111020
CN102327658 B	20130116	CN201110320499	20111020
CN202236714 U	20120530	CN201120401467U	20111020
MA34940 B1	20140301	MA20120035433	20121206
RU2014100250 A	20151127	RU20140100250	20111117
RU2594816 C2	20160820	RU20140100250	20111117
US2014221923 AA	20140807	US20110131187	20111117
US9586013 BB	20170307	US20110131187	20111117
WO13056485 A1	20130425	WO2011CN082337	20111117
WO13056485 A9	20131128	WO2011CN082337	20111117

Priority:

CN201110320499 20111020 CN201120401467U 20111020 WO2011CN082337 20111117

Probable Assignee: BAI BAODONG

Assignee(s): (std): BAI BAODONG ; BAI BAODUN ; BAODONG BAI

Inventor(s): (std): BAI BAODONG ; BAI BAODUN ; BAODONG BAI

Agent(s): MASCHOFF BRENNAN; NANJING TIANHUA PATENT AGENT CO LTD ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ 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 IS IT JP KE KG KM KN KP KR KZ LA LC 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 PE PG PH PL PT QA RO RS RU RW 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

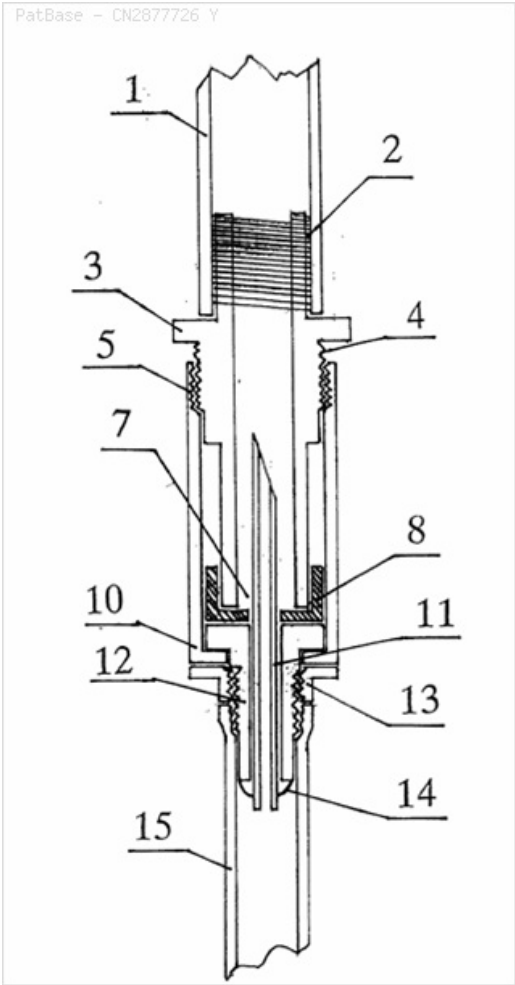
22) Family number: 34347111 (CN2877726 Y) © PatBase

Title: Medical anti-pressure sterile pipeline connector

Abstract: A medical compression-resisting sterile pipeline connector, comprising a joint A and a joint B, belongs to the field of the medical infusion device. The hollow joint A with screw threads on both ends one of which is connected with the pipeline of infusion package or the blood package (1), the outlet (7) of the other of which is closed up by a non-toxic rubber cap (8) and is fastened on the outside by an antibacterium protective cover (6) winded-up. On the middle part of the joint B a puncture connecting needle tube (11), a revolving tube (10) with screw threads on the surrounding and an antibacterium protective cover (9), as well as a distance fixing ring with screw threads winded-up, are provided. The connecting end of the joint B is connected with the intravenous infusion needle with a burette or the inlet of the pipeline of the fractional infusion package (15). In operation, at first take off the two antibacterium protective covers, then insert the puncture connecting needle tube into the non-toxic rubber cap, at last wind up the revolving tube and complete the sterile connection of the two pipelines.

Classifications:

International (IPC 8-9): A61M1/02 A61M39/00 A61M5/14



Family:

Publication number	Publication date	Application number	Application date
■ CN2877726 Y	20070314	CN200620033086U	20060216

Priority:

CN200620033086U 20060216

Probable Assignee:

YAN DONGYOU

Assignee(s): (std):

YAN DONGYOU

Inventor(s): (std):

YAN DONGYOU

Inventor(s):

DONGYOU YAN

23) Family number: 10999997 (US5176657 A) © PatBase

Title: Shot gun syringe with cartridge and scabbards

Abstract: Syringes using pre-loaded cartridges for injecting fluid medications can be made safer for users and patients, more compliant with modern infection-control precautions, and easier to operate by supplying thumb-ring activated, breech-loading syrettes with screw-on plungers for aspirating into and emptying transparent cartridges with permanently attached needles. The cartridges can be made with trailing terminal circular flanges with gaps for stabilizing the cartridge in the syrette

breech chambers closed by hinging breech blocks; permanently attached leading needles whose exposed tips are kept sterile before use by thin disposable elastomeric scabbards; and whose trailing ends optimize visualization of flashback. Such "shot-guns" consisting of reusable breech-loading syrettes and disposable pre-loaded transparent cartridges with attached needles can be supplied with two part puncture resistant plastic scabbard systems and trailing caps which integrate to keep the cartridges and needles sterile before use; which can be used as a convenient sterile holders for loaded or partially unloaded cartridges inside the syrettes, and which implement safe ejection of empty disposable cartridges with permanently attached needles from the breech chambers of the syrettes into sharps containers, thereby minimizing opportunities for hazardous needle-stick injuries.

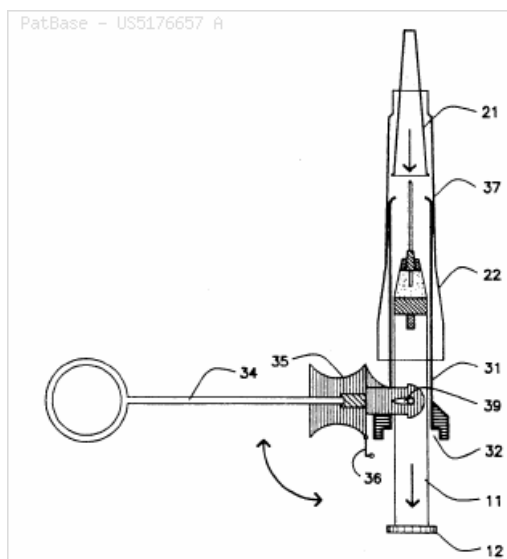
Classifications:

International (IPC 8-9): A61M5/24 A61M5/32

International (IPC 1-7): A61M5/00

CPC: A61M2005/2407 A61M2005/2496 A61M5/24 A61M5/3202 A61M5/3213 A61M5/3243

US: 604/192 604/197 604/232 604/263



Family:

Publication number	Publication date	Application number	Application date
US5176657 A	19930105	US19920821178	19920115

Priority:

US19920821178 19920115

Probable Assignee:

SHIELDS JACK W

Assignee(s): (std):

SHIELDS JACK W

Inventor(s): (std):

SHIELDS JACK W

24) Family number: 51890849 (US2012226233 AA)

© PatBase

Title: PEN NEEDLE WITH SAFETY SHIELD SYSTEM

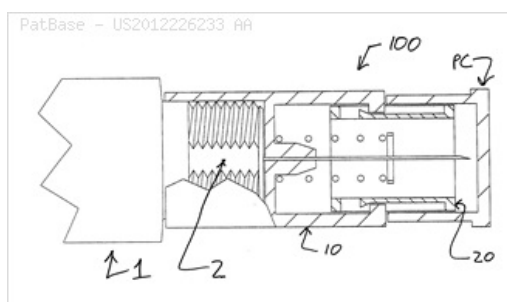
Abstract: A needle tip for an injection device includes a body having a front portion, a back portion configured to be removably connected to the pre-loaded injection device, and a wall separating the front and back portions. A hollow needle has a first piercing portion projecting back from the separating wall and a second piercing portion projecting forward from the separating wall. A safety shield that is axially movable relative to the body at least between an initial position, a retracted position, and a post use locking position. This Abstract is not intended to define the invention disclosed in the specification, nor intended to limit the scope of the invention in any way.

Classifications:

International (IPC 8-9): A61M5/32 A61M5/34 A61M5/46 A61M5/50

CPC: A61M2005/3247 A61M2005/3267 A61M2205/582 A61M5/3205 A61M5/3245 A61M5/326 A61M5/347 A61M5/46 A61M5/50 A61M5/5086

US: 1/1 604/110 604/111 604/192 604/198



Family:

Publication number	Publication date	Application number	Application date
US2012226233 AA	20120906	US20120398173	20120216
US8961470 BB	20150224	US20120398173	20120216
US2015094659 AA	20150402	US20140563519	20141208
US10518043 BB	20191231	US20170457907	20170313
US2017182260 AA	20170629	US20170457907	20170313

Priority:

US20110443958P 20110217
US20170457907 20170313

US20120398173 20120216

US20140563519 20141208

Probable Assignee:

STAT MEDICAL DEVICES INC

Assignee(s): (std):

SCHRAGA STEVEN ; STAT MEDICAL DEVICES INC

Inventor(s): (std):

SCHRAGA STEVEN

Agent(s):

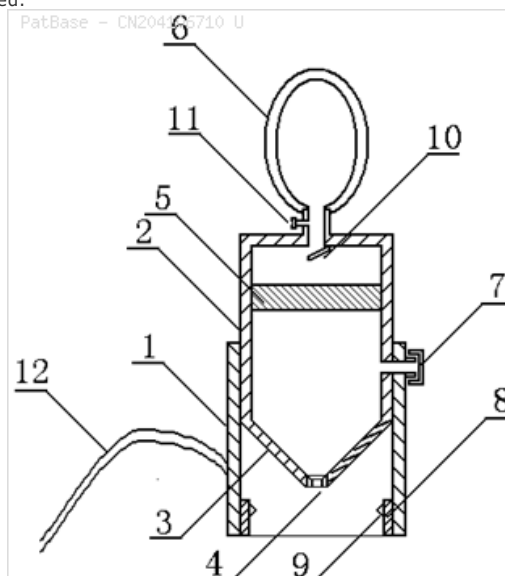
GREENBLUM AND BERNSTEIN PLC ; THOMAS HORSTEMEYER LLP

Title: INFUSION DETAINING NEEDLE HEAD PROTECTION DEVICE FOR PEDIATRICS

Abstract: The utility model discloses an infusion detaining needle head protection device for pediatrics. The infusion detaining needle head protection device comprises a cap body detachably connected with the outer surface of an infusion joint, a hollow liquid sealing tube is arranged on the upper part inside the cap body, the liquid sealing tube is connected with the cap body through screw threads, the lower end of the liquid sealing tube is provided with a conical liquid sealing head, the liquid sealing head is matched with an inner hole of the infusion joint, a liquid outlet hole communicated with an inner cavity of the liquid sealing tube is formed in the liquid sealing head, a one-way valve is arranged on the liquid outlet hole, a piston is arranged in the liquid sealing tube, an air bag is arranged on the top of the liquid sealing tube, an inner cavity of the air bag is communicated with the inner cavity of the liquid sealing tube, one side of the cap body is provided with a liquid injection opening, and the liquid injection opening is communicated with the inner cavity of the liquid sealing tube and is provided with a sealing cover. The infusion detaining needle head protection device has the advantages that the structure is simple, the design is reasonable, the outward exposure of a connector can be prevented, the liquid sealing and the isolation are integrated, the infusion detaining needle head protection device can be used for many times, the protection performance is good, the operation is simple, and the work efficiency can be improved.

Classifications:

International (IPC 8-9): A61M5/14 A61M5/158

**Family:**

Publication number	Publication date	Application number	Application date
CN204106710 U	20150121	CN201420622684U	20141027

Priority:

CN201420622684U 20141027

Probable Assignee:

WANG KE

Assignee(s): (std):

WANG KE

Assignee(s):

KE

Inventor(s): (std):

WANG KE

Title: PEN NEEDLE ASSEMBLY

Abstract: A pen needle is provided with a plastic non-patient end. Since the non-patient end needle does not contact the patient, the needle can be formed with a larger diameter, permitting more secure attachment to a medication pen and greater medication flow from the cartridge through the cannula. In addition, a two-part hub construction comprising a needle bearing sub assembly and an adapter for attachment to the pen body may be used to lower materials volume and costs, and reduce sharps disposal. In embodiments, a hub according to the invention may be provided with a shield that provides an audible and/or tactile indication when full penetration depth of the needle is achieved. Windows on the shield may reveal a color band on the hub at the full-penetration depth position to provide the user with a visual indication that the pen needle has been used.

Classifications:

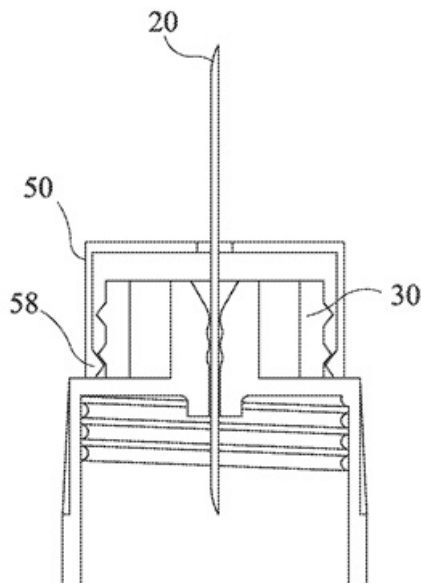
International (IPC 8-9): A61B5/15 A61M5/00 A61M5/178 A61M5/20 A61M5/24 A61M5/31 A61M5/32 A61M5/34 A61M5/46 A61M5/50

CPC: A61B5/150175 A61B5/150183 A61B5/15019 A61B5/150198 A61M2205/581 A61M2205/582 A61M2205/583 A61M2205/584

A61M2206/00 A61M5/002 A61M5/3286 A61M5/329 A61M5/3293

A61M5/345 A61M5/346 A61M5/347 A61M5/46 A61M5/5086

US: 604/117 604/192 604/243

**Family:**

Publication number	Publication date	Application number	Application date
CA2895757 AA	20150618	CA20132895757	20131220
CN204864385 U	20151216	CN201390001018U	20131220
EP2938372 A2	20151104	EP20130866547	20131220
EP2938372 A4	20170118	EP20130866547	20131220
EP2938372 B1	20190904	EP20130866547	20131220
EP3593837 A1	20200115	EP20190194408	20131220
ES2754028 T3	20200415	ES20130866547T	20131220
JP2016505336 T2	20160225	JP20150550683T	20131220
JP6599771 B2	20191030	JP20150550683T	20131220
JP2018099515 A2	20180628	JP20170241969	20131220
US10350371 BB	20190716	US20130655710	20131220
US2015328412 AA	20151119	US20130655710	20131220
US2019282768 AA	20190919	US20190428346	20190531
WO14105667 A2	20140703	WO2013US76787	20131220
WO14105667 A3	20141009	WO2013US76787	20131220

Priority:

US20120746109P 20121226	US20120746108P 20121226	US20120746103P 20121226
WO2013US76787 20131220	EP20130866547 20131220	JP20150550683T 20131220
US20130655710 20131220	US20150655710 20150625	US20190428346 20190531

Probable Assignee: BECTON DICKINSON AND CO**Assignee(s):** (std): BECTON DICKINSON CO**Assignee(s):** BANIK ROBERT ; BATES JAMES ; BECTON DICKINSON AND CO ; BRIZZOLARA JOSEPH ; HERR JOSHUA ; LIMAYE AMIT ; RAJ ABHIJITSINH S**Inventor(s):** (std): ABHIJITSINH S RAJ ; AMIT LIMAYE ; BANIK ROBERT ; BATES JAMES ; BRIZZOLARA JOSEPH ; HERR JOSHUA ; JAMES BATES ; JOSEPH BRIZZOLARA ; JOSHUA HERR ; LIMAYE AMIT ; RAJ ABHIJITSINH S ; ROBERT BANIK**Agent(s):** DICKINSON WRIGHT PLLC; DOMPATENT VON KREISLER SELTING WERNER PARTNERSCHAFT VON PATENT U RECHTSANWALTEN MBB; ELZABURU SLP; GOWLING LAFLEUR HENDERSON LLP; MEE BRENDAN; TANI AND ABE PC; VON KREISLER SELTING WERNER PARTNERSCHAFT VON PATENTANWALTEN U RECHTSANWALTEN MBB**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**27) Family number: 28542208** (WO03041768 A1)

© PatBase

Title: INJECTION DEVICE AND AMPOULE, PARTICULARLY FOR AN INJECTION DEVICE

Abstract: The injection device (10) is characterized in that it is constructed of an ampoule (12), which comprises an ampoule body (14) and an ampoule piston (16), of a filling device (18) for the ampoule (12), of a cartridge having a closed withdrawal opening (24), of a tightening device (26) for the ampoule piston (16), and of an initiating device (28) for subjecting the ampoule piston (16) to a driving force. In order to form a chamber (30) in the ampoule body (14), the ampoule piston (16) is guided while being longitudinally displaced in a sealed manner. The ampoule body (14) has a discharge opening (32) for the medium to be injected, whereby the ampoule piston (16) has a channel (34) for filling the ampoule, said channel being longitudinally guided through the ampoule piston (16). A hollow needle (36) is placed inside the channel (34) on the side of the ampoule piston (16), said side facing the cartridge (20). The closed withdrawal opening (24) of the cartridge (20) can be penetrated by the hollow needle. The filling device (18) has a pump device (38) with which a defined quantity of the medium

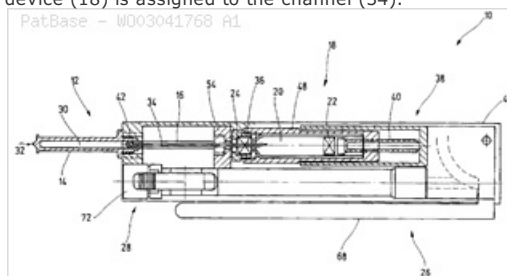
can be forced out of the cartridge (20) and into the chamber (30), and a non-return valve (42) for automatically blocking an excess flow of the medium from the chamber (30) and into the filling device (18) is assigned to the channel (34).

Classifications:

International (IPC 8-9): A61M5/20 A61M5/24 A61M5/30

International (IPC 1-7): A61M5/20 A61M5/24 A61M5/30

CPC: A61M2005/2073 A61M5/2033 A61M5/204 A61M5/24 A61M5/30



Family:

Publication number	Publication date	Application number	Application date
DE20121719 U1	20030424	DE20012021719U	20011114
DE20121720 U1	20030424	DE20012021720U	20011114
DE10253637 A1	20031106	DE20021053637	20021114
EP1448255 A1	20040825	EP20020803026	20021114
WO03041768 A1	20030522	WO2002EP12769	20021114

Priority:

DE20011055770 20011114 DE20011055784 20011114 DE20012021719U 20011114
DE20012021720U 20011114 DE20021053637 20021114 WO2002EP12769 20021114

Probable Assignee: RIEMSER ARZNEIMITTEL AG

Assignee(s): (std): RIEMSER ARZNEIMITTEL AG ; ROESCH AG MEDIZINTECHNIK ; ROESCH MEDIZINTECHNIK AG ; SCHULZ KARL

Inventor(s): (std): SCHULZ KARL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE 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 LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

28) Family number: 31724968 (TWM243215 Y)

© PatBase

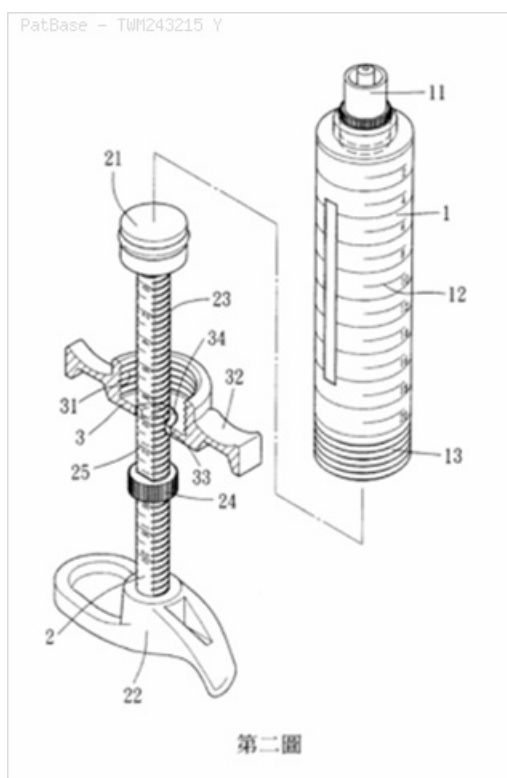
Title: Structure improvement on injection syringe for animal

Abstract: Source: TWM243215 Y **Machine translation:** This creation mainly is provides one kind of animal with the injection tube structure improvement, contains in the one to inject the tube and a pushing ram spatially; Among them, but injects front end the tube to be equipped with a needle valve seat the terminal outer wall formation to have the thread; The pushing ram body of rod passed through front end casing of Ge Bingyu to suppose an advancement block firmly, the body of rod terminal as soon as then supposes firmly pushes the handle, the pusher arm body of rod surface formation has on the external screw thread also the body of rod the spiral supposes the ration knob; The tube covers internal formation to have the box thread to enable the spiral to be located in the injection tube terminal, as soon as also covers the body central start to supply the pushing ram to put on supposes the perforation, in the perforation inlays the solid metal eye ring, makes this metal eye ring to or lie between the pushing ram body of rod and the tube covers between the perforation opening wall, prevented the pushing ram body of rod and the tube lid have the friction to create the tube to cover the attrition, enables has the protection injection tube to cover, to prevent the tube covers merit of the deterioration and the effect.

Classifications:

International (IPC 8-9): A61M5/178

International (IPC 1-7): A61M5/178



Family:

Publication number	Publication date	Application number	Application date
TWM243215 Y	20040911	TW20030216668U	20030917

Priority:

TW20030216668U 20030917

Probable Assignee:

JANG JR SHIAN

Assignee(s): (std):

JANG JR SHIAN

Inventor(s):

JANG JR SHIAN

29) Family number: 1703538 (DE2147183 A1)

© PatBase

Title: IMMUNIZING INSTRUMENT - FOR SERIAL INJECTIONS HAVING A CARTRIDGE OF INDIVIDUALLY DISPENSED CANNULAS AND TEFLON (RTM) PARTS

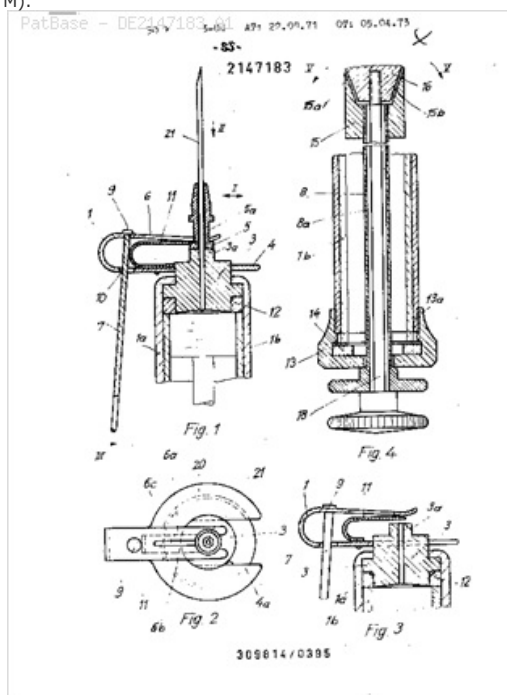
Abstract: The instrument comprises a hypodermic syringe, and several cannulas in a cannula magazine, in which the cannula is fixed to the syringe by a retaining clip fastened by one arm to the syringe and with a springy holding arm which engages over the foot of the cannula and presses at right angles to the bearing surface of the plate on the lower end of the cannula foot which runs parallel to the terminal surface of the syringe mouthpiece. The clip can be manually forced into the inoperable position in which the cannula foot is released. Pref. the ring on a screw cap sealing the syringe barrel, the plunger, the cannular foot and the magazine holder are all made of Teflon (RTM).

Classifications:

International (IPC 8-9): A61M5/00 A61M5/31 A61M5/315 A61M5/32 A61M5/34

International (IPC 1-7): A61M5/18 A61M5/31 A61M5/32 A61M5/34

CPC: A61M2005/3206 A61M5/008 A61M5/3129 A61M5/31513 A61M5/3205 A61M5/34 A61M5/344

**Family:**

Publication number	Publication date	Application number	Application date
DE2147183 A1	19730405	DE19712147183	19710922
DE2147183 B2	19750717	DE19712147183	19710922
DE2147183 C3	19760226	DE19712147183	19710922

Priority:

DE19712147183 19710922

Probable Assignee:

SCHMIDBERGER GERHARD

Assignee(s): (std):

SCHMIDBERGER GERHARD

Assignee(s):

SCHMIDBERGER GERHARD 7451 RANGENDINGEN

Inventor(s): (std):

SCHMIDBERGER GERHARD

Inventor(s):

SCHMIDBERGER GERHARD 7451 RANGENDINGEN

30) Family number: 65298737 (US2018021522 AA)

© PatBase

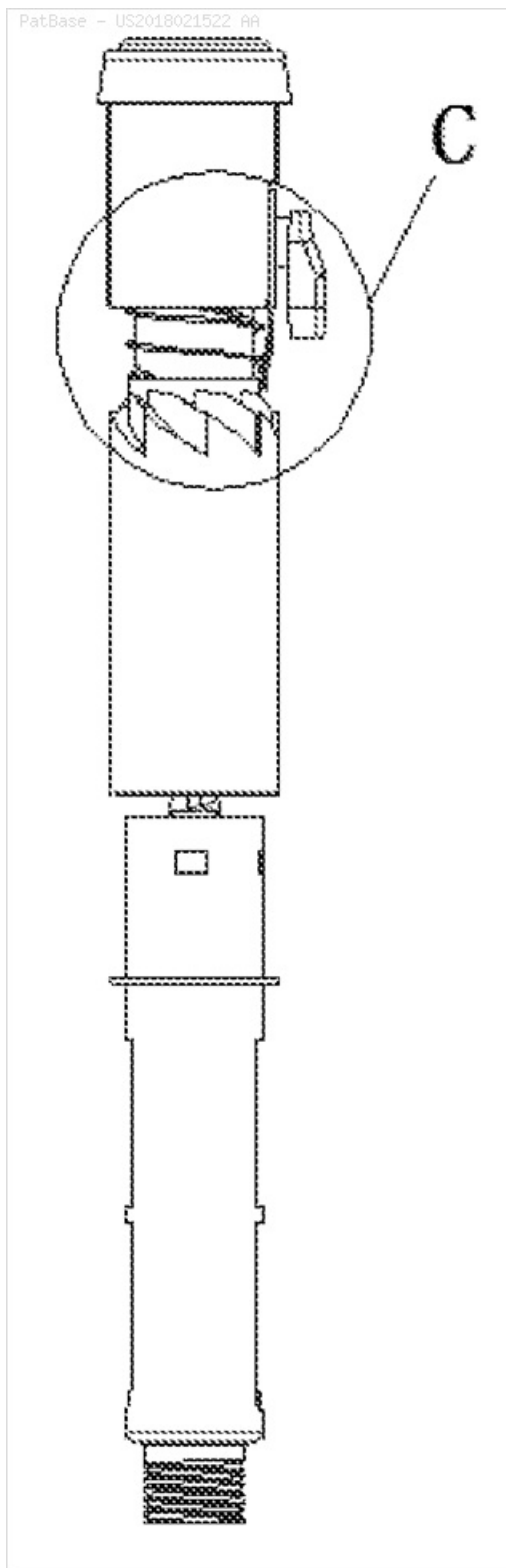
Title: MEDICAL INJECTION DEVICE

Abstract: A medical injection device, comprising: a housing having a first end cover and a second end cover provided at two ends thereof, respectively; a dial threaded rod, which is in threaded connected to the first end cover; and, a piston rod, which is used for expelling a dose, an upper end of the piston rod being connected to the dial threaded rod through a driving mechanism while a lower end thereof is in threaded connected to the second end cover. It further comprises a dosage adjustment mechanism, which is arranged between the dial threaded rod and the housing and used for driving the dial threaded rod to move in an axial direction of the housing.

Classifications:

International (IPC 8-9): A61M5/00 A61M5/20 A61M5/24 A61M5/31 A61M5/315 A61M5/32

CPC: A61M2005/2492 A61M2005/3126 A61M2205/0216 A61M5/24 A61M5/2422 A61M5/31541 A61M5/31551 A61M5/31586 A61M5/3204



Family:

Publication number	Publication date	Application number	Application date
■ CN206045102 U	20170329	CN201620773271U	20160721
■ CN206063507 U	20170405	CN201620773474U	20160721
■ CN207562176 U	20180703	CN201720547256U	20170517
■ CN208130222 U	20181123	CN201720606431U	20170527
■ JP3213066 U	20171019	JP20170003293U	20170719
■ TWM553638 Y	20180101	TW20170210797U	20170721
■ US10617828 BB	20200414	US20170655744	20170720
■ US2018021522 AA	20180125	US20170655744	20170720

Priority:

CN201620773271U 20160721 CN201620773474U 20160721 CN201720547256U 20170517
 CN201720606431U 20170527

Probable Assignee: SHANGHAI JS MEDICAL TECH CO LTD

Assignee(s): SHANGHAI JIUSEN MEDICAL TECH CO LTD ; SHANGHAI JS MEDICAL TECH CO LTD ; WENG JIAN SEN

Assignee(s): SHANGHAI JIUSEN MEDICAL TECHNOLOGY CO ; SHANGHAI JS MEDICAL TECHNOLOGY CO

Inventor(s): (std): QIU YUNFENG ; WENG JIAN SEN

31) Family number: 19015498 (ES2026368 AF)

© PatBase

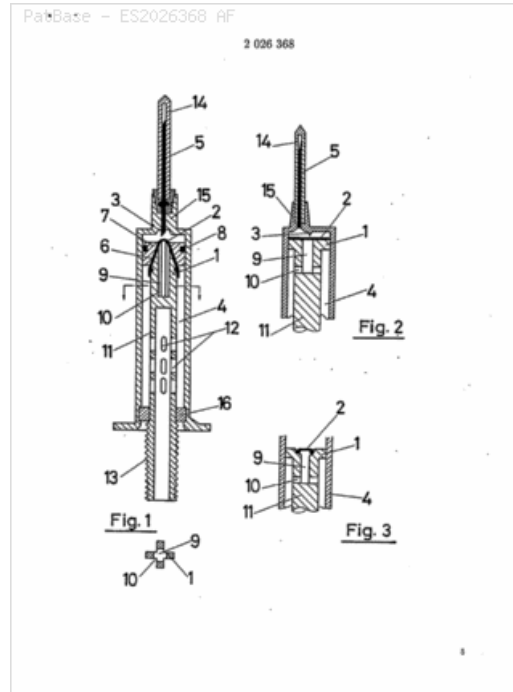
Title: AUTOMATICALLY DESTRUCTIBLE SINGLE-USE SAFETY SYRINGE ; AUTOMATICALLY DESTRUCTIBLE SINGLE-USE SAFETY SYRINGE

Abstract: It prevents possible disease infections, for which purpose the plunger 1 has a membrane 2 which can be perforated by a piercing element 3 arranged in the bottom of the cylindrical chamber 4, preventing a second use. The piercing element may be incorporated in the cylindrical chamber 4 or, alternatively, be an extension of the actual syringe 5 towards the inside of the cylindrical chamber 4. The membrane 2 is a discoidal body adhered to the front of the plunger 1, totally or partially covering its surface or, alternatively, it consists of a cap arranged between a projection 6 and a ring 7 carrying a toric washer 8 for its adjustment (fitting) to the inside contour delineation of the cylindrical chamber 4. The plunger 1 has a longitudinal hole 9 with lateral branches 10 which open out in the rod 11 and in the cylindrical chamber 4. It also has radial holes 12 which provide communication from the space included between it and the cylindrical chamber 4 to the outside, in such a manner that once the membrane 2 has been destroyed the chamber of the syringe is in communication with the outside and therefore out of use.

Classifications:

International (IPC 8-9): A61M5/178 A61M5/50

International (IPC 1-7): A61M5/178 A61M5/50

**Family:**

Publication number	Publication date	Application number	Application date
ES2026368 AF	19920416	ES19900002681	19901023

Priority:

ES19900002681 19901023

Probable Assignee: MELERO REDRADO FERNANDO

Assignee(s): (std): MELERO REDRADO FERNANDO

32) Family number: 32488432 (US5827262 A)

© PatBase

Title: SYRINGE DEVICE FOR MIXING TWO COMPOUNDS

Abstract: PCT No. PCT/FR94/01053 Sec. 371 Date Mar. 7, 1996 Sec. 102(e) Date Mar. 7, 1996 PCT Filed Sep. 7, 1994 PCT Pub. No. WO95/07066 PCT Pub. Date Mar. 16, 1995A syringe device for mixing two compounds is provided. The syringe device includes a vial having an opening and a centrally perforable stopper. The syringe device also includes a guide tube for guiding the injection end of the syringe between a withdrawn or storage position and an inserted position. The guide tube includes a second end for receiving the injection end of the syringe, which also includes a seal between the body of the syringe and the guide tube.

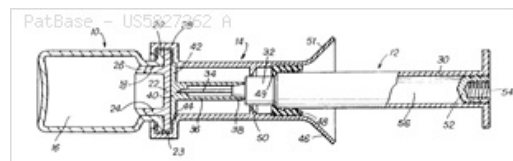
Classifications:

International (IPC 8-9): A61J1/00 A61J1/14 A61J1/20 A61M39/00 A61M5/178 A61M5/19 A61M5/24 A61M5/31 A61M5/315 A61M5/32 A61M5/46

International (IPC 1-7): A61B19/00 A61J1/20 A61M39/00 A61M5/19 A61M5/24 A61M5/31 A61M5/46

CPC: A61J1/201 A61J1/2065 A61J1/2075 A61J1/2082 A61J1/2096 A61M2005/31516 A61M5/321 A61M5/3213 A61J1/2089 A61M5/1782 A61M5/19 A61M2005/3132 A61M5/20 A61M5/3134 A61M5/3287

US: 604/414 604/82 604/86 604/87 604/88

**Family:**

Publication number	Publication date	Application number	Application date
AU199476180 A1	19950327	AU19940076180	19940907
AU684544 B2	19971218	AU19940076180	19940907
BRPI9407390 A	19961105	BR1994PI07390	19940907
CA2170160 AA	19960222	CA19942170160	19940907

CA2170160 C	20020827	CA19942170160	19940907
CN1106189 C	20030423	CN19941093805	19940907
CN1133003 A	19961009	CN19941093805	19940907
DE69412492 D1	19980917	DE19946012492T	19940907
DE69412492 T2	19990211	DE19946012492T	19940907
EP0717611 A1	19960626	EP19940926283	19940907
EP0717611 B1	19980812	EP19940926283	19940907
ES2122321 T3	19981216	ES19940926283T	19940907
FR2705897 A1	19941209	FR19930006707	19930604
FR2708204 A1	19950203	FR19930010593	19930907
FR2705898 A1	19941209	FR19930012271	19931015
FR2708205 A1	19950203	FR19930013627	19931116
FR2708469 A1	19950210	FR19930015639	19931224
FR2714294 A1	19950630	FR19940000828	19940126
FR2715311 A1	19950728	FR19940002844	19940311
FR2717086 A1	19950915	FR19940006314	19940525
JP3325896 B2	20020917	JP19950508493T	19940907
JP9502116 T2	19970304	JP19950508493T	19940907
KR100360586 B1	20030512	KR19960701154	19940907
KR19960704515 A	19961009	KR19960701154	19960307
RU2141306 C1	19991120	RU19960107466	19940907
RU96107466 A	19980710	RU19960107466	19960306
US5827262 A	19981027	US19960617838	19960307
WO9507066 A1	19950316	WO1994FR01053	19940907
ZA9406884 A	19950426	ZA19940006884	19940907

Priority:

FR19930006707 19930604	FR19930010593 19930907	FR19930012271 19931015
FR19930013627 19931116	FR19930015639 19931224	FR19940000828 19940126
FR19940002844 19940311	FR19940006314 19940525	WO1994FR01053 19940907

Probable Assignee: DEBIOTECH SA

Assignee(s): (std): BOPTECH S A ; BOUVIER BERNARD ; DEBIOTECH ; DEBIOTECH S A ; DEBIOTEK S A ; NEFTEL FREDERIC

Assignee(s): DEBIOTECH CP SA ; DEBIOTECH S A LAUSANNE CH

Inventor(s): (std): BERNAR BUV E ; BERNARD BOUVIER ; BOUVIER B ; BOUVIER BERNARD ; FREDERIC NEFTEL ; FREDERIK NEFTEL ; NEFTEL F ; NEFTEL FREDERIC

Inventor(s): B BOUVIER ; BERNAR BUV'E ; BOUVIER BERNARD F 95610 ERAGNY SUR OISE FR ; F NEFTEL ; FREDERIK NEFTEL' ; NEFTEL FREDERIC CH 1000 LAUSANNE 9 CH

Agent(s): FB RICE ; FB RICE PTY LTD ; ROBIC

Designated states: AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GH GN GR HU IE IT JP KE KG KP KR KZ LI LK LR LT LU LV MC MD MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SI SK SN SZ TD TG TJ TT UA UG US UZ VN ZW

33) Family number: 42153108 (WO9011103 A2)

© PatBase

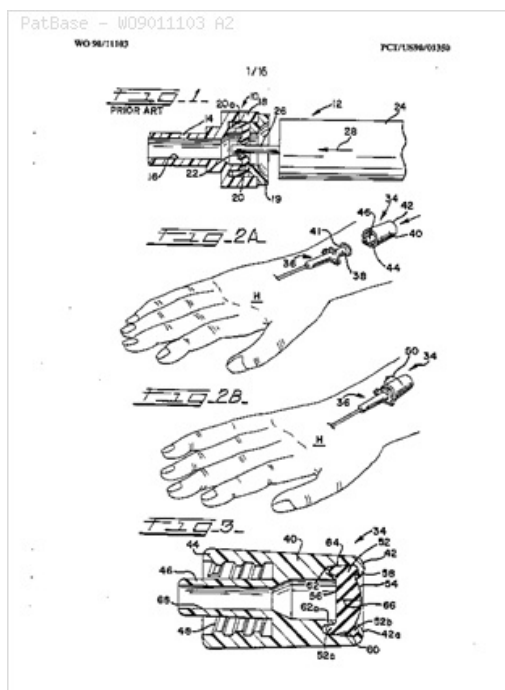
Title: PRE-SLIT INJECTION SITE AND TAPERED CANNULA

Abstract: A blunt-ended cannula device for use with a pre-slit resealable injection site (492), the cannula device (512) comprising an elongated member (518) with a fluid flow channel extending generally axially therewithin and through a distal end of the member, the member being generally cylindrical along a substantial portion of its length, and terminating in a generally tapered distal end portion having a blunt end edge. A substantially cylindrical sheath (516) surrounds the elongate member (518) and is at least co-extrusive with and spaced apart from the elongated member to protect the member from inadvertent touch contamination. The distal end of the sheath has at least two slots (528) opposite each other for receiving inlet and outlet portions (494,496) of an in-line injection site (492).

Classifications:

International (ipc 8-9): A61B5/15 A61B5/153 A61J1/00 A61J1/05 A61J1/10 A61J1/14 A61J1/20 A61M25/00 A61M37/00 A61M39/00 A61M39/02 A61M39/04 A61M39/14 A61M5/14 A61M5/162 A61M5/32 A61M37/00 A61M39/00 A61M39/02 A61M39/04 A61M39/10 A61M5/162 A61M5/32

CPC: A61J1/10 A61J1/1406 A61J1/1475 A61J1/201 A61J1/2055 A61J1/2089 A61J1/2096 A61M2039/1033 A61M2039/1066 A61M2039/1072 A61M2205/195 A61M2205/197 A61M39/045 A61M39/1011 A61M39/14 A61M5/162 Y10S604/905



Family:

Publication number	Publication date	Application number	Application date
AU199053332 A1	19901022	AU19900053332	19900316
AU634532 B2	19930225	AU19900053332	19900316
AU199337183 A1	19930701	AU19930037183	19930422
AU666181 B2	19960201	AU19930037183	19930422
AU199480222 A1	19950316	AU19940080222	19941206
AU678071 B2	19970515	AU19940080222	19941206
AU199530221 A1	19951123	AU19950030221	19950825
AU199537960 A1	19960125	AU19950037960	19951120
AU681317 B2	19970821	AU19950037960	19951120
CA2027591 AA	19901023	CA19902027591	19900316
CA2027591 C	19960227	CA19902027591	19900316
DE69009131 D1	19940630	DE19906009131T	19900316
DE69009131 T2	19950119	DE19906009131T	19900316
DE69019170 D1	19950608	DE19906019170	19900316
DE69019170 T2	19951130	DE19906019170T	19900316
DE69019170 T4	19960530	DE19906019170T	19900316
DE69023926 D1	19960111	DE19906023926T	19900316
DE69023926 T2	19960814	DE19906023926T	19900316
EP0419620 A1	19910403	EP19900905119	19900316
EP0419620 B1	19940525	EP19900905119	19900316
ES2057546 T3	19941016	ES19900905119T	19900316
ES2083247 T3	19960401	ES19930200021T	19900316
ES2074909 T3	19950916	ES19930200022T	19900316
IE62767 B	19950222	IE19900000938	19900315
IE900938 L	19900917	IE19900000938	19900315
JP2130747 C3	19970711	JP19900505095	19900316
JP3504571 T2	19911009	JP19900505095T	19900316
JP7110284 B4	19951129	JP19900505095T	19900316
JP3411984 B2	20030603	JP19950157477	19950623
JP8243092 A2	19960924	JP19950157477	19950623
JP2002191583 A2	20020709	JP20010319511	20011017
JP2003126269 A2	20030507	JP20020217087	20020725
JP2006055670 A2	20060302	JP20050328129	20051111
MX173202 B	19940208	MX19900019915	19900315
WO9011103 A2	19901004	WO1990US01350	19900316
WO9011103 A3	19910110	WO1990US01350	19900316

Priority:

US19890325617 19890317	WO1990US01350 19900316	AU19900053332 19900316
JP19950157477 19900316	JP20010319511 19900316	JP20020217087 19900316
JP19900505095 19900316	AU19930037183 19930422	AU19900053332 19930422

Probable Assignee: BAXTER INT**Assignee(s):** (std): BAXTER INT ; BRADFORD JOHN GEORGES

Assignee(s): BAXTER INT INC ; BAXTER INT INCORPORATED ; BAXTER INTERNATIONAL INC ; BAXTER INTERNATIONAL INC DEERFIELD ILL ; BAXTER INTERNATIONAL INC DEERFIELD ILL US ; BAXTER INTERNATIONAL INCORPORATED ; BAXTER INTERNATL INC ; DESECKI VINCENT C ; DUDAR THOMAS E ; EDWARDS LIFESCIENCES CORP ; FINLEY MICHAEL J ; JEPSON STEVEN C

Inventor(s): (std): DESECKI VINCENT ; DESECKI VINCENT C ; DESESUKII BUINSENTO SHII ; DEYUDAA TOOMASU II ; DUDAR THOMAS ; DUDAR THOMAS E ; FINLEY MICHAEL ; FINLEY MICHAEL J ; FUINREE MIKAERU JIEI ; JEPSON STEVEN ; JEPSON STEVEN C ; JIEPUSON SUTEIIBUN SHII

Inventor(s): DESESUKII UINSENTO SHII ; FUINREE MIKAERU JEI ; JEPUSON SUTEIIBUN SHII ; MICHAEL J FINLEY ; STEVEN C JEPSON ; THOMAS E DUDAR ; VINCENT C DESECKI

Agent(s): MAXWELLS PATENT AND TRADE MARK ATTORNEYS PTY LTD; PETER MAXWELL AND ASSOCIATES; SIM AND MCBURNEY

Designated states: AT AU BE CA CH DE DK ES FR GB IT JP LI LU NL SE