



New connection on: : 18-04-2018 : 04:17:26 - Last disconnection on: : 14-04-2018 : 09:02:10

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[No database/cluster active] ..fiepodoc

 Database: EPODOC

[EPODOC: SS 1] bottles 1w positioner

Results in EPODOC 1

[SS 2] bottle 1w positioner

Results in EPODOC 30

[SS 3] ..li



1/30 © EPODOC / EPO

PN - [CN206553175U](#) U 20171013

PR - CN2017216215U 20170106

AP - CN2017216215U 20170106

DT - I

PA - WUHU IROBSYS ROBOT CO LTD

TI - Automatic upper cover equipment of bulb bottle lid

AB - The utility model relates to an automatic upper cover equipment of bulb bottle lid comprises frame, the high -speed parallel robot of D2, bottle transfer chain, oscillating lane mechanism, **bottle positioner**, bulb bottle lid reason material equipment, bottle lid guiding device, end effector, vertical arranged about the bottle transfer chain is with bulb bottle lid reason material equipment, the bottle transfer chain interlocks in the positive lower part of frame with the combination part of bulb bottle lid reason material equipment, and oscillating lane mechanism installs in the top of bottle transfer chain, the mid -mounting of frame has violently indulges the floor, and bottle lid guiding device, **bottle positioner** all install on violently indulging the floor, and the high -speed parallel robot of D2 is installed in the upper portion of frame, and end effector installs the lower extreme at the high -speed parallel robot of D2. The utility model discloses not only can improve the success rate of placing the bottle lid and the work efficiency of upper cover, the automatic upper cover mode reasonable in design of bottle lid moreover, the precision is high to upper cover work in batches can be realized at every turn, the cost of labor is saved.

2/30 © EPODOC / EPO

PN - [CN206599419U](#) U 20171031
PR - CN201621095566U 20160930
AP - CN201621095566U 20160930
DT - I
PA - SHANGHAI LEADWORLD MACHINERY TECH CO LTD
TI - Servo rotational positioning closing machine
AB - The utility model discloses a servo rotational positioning closing machine, including **bottle positioner** and **bottle lid positioner**, **bottle positioner** including the transfer chain, advance a bottle screw rod, push away a **bottle positioner**, initiatively revolve the bottled swiveling wheel of putting and take the initiative, **bottle lid positioner** includes the bottle lid spout, hangs and cover the boss, string cover the device and inhale and cover capping device, **bottle positioner** and **bottle lid positioner** fix and set up in the frame, be equipped with the supply line in the middle of the frame, the top of supply line middle part is connected and is equipped with into bottle screw rod, the inside one side of frame is equipped with initiatively revolves bottled putting, initiatively revolves bottled putting and is provided with the initiative swiveling wheel, and the inside one side in addition of frame is provided with to hang covers the device, the utility model discloses can not only satisfy the pressfitting of general type bottle lid, the phenomenon of bottle lid and bottle can not appear haring in pressfitting in the time of can also satisfying bottle lid and bottle and have relative position to require. This equipment reasonable in design, compact structure fixes a position accurately, and the reliability is high.

3/30 © EPODOC / EPO

PN - [CN206599051U](#) U 20171031
PR - CN20172316016U 20170328
AP - CN20172316016U 20170328
DT - I
PA - GUANGZHOU LETONEMACHINERY LTD
TI - A **bottle positioner** for labeller
AB - The utility model discloses a **bottle positioner** for labeller, including the organism, be used for the support bottle seat and the positioning seat of pin joint on the organism of fixed bottle, ask the bottle seat to install on the positioning seat, set up the mounting groove at the bottom of the storage bottle in the support bottle seat, bottle end pin joint is in the mounting groove, be equipped with positioning mechanism on the positioning seat, positioning mechanism includes constant head tank, locating pin and elastomeric element, and the top of constant head tank is link up in the mounting groove, compared with the prior art, the constant head tank rotate to with the bottle end the notch just to the time, the locating pin is in elastic stress's effect down the notch motion towards the bottle at the bottom of so that the locating pin cartridge in the notch at the bottle end. The utility model discloses a **bottle positioner** for labeller, the location of its bottle of being convenient for is fixed, simple structure.

4/30 © EPODOC / EPO

PN - [CN206580534U](#) U 20171024
PR - CN20172210964U 20170306

AP - CN20172210964U 20170306
DT - I
PA - SHANGHAI DECAI MINING MACHINERY CO LTD
TI - **Bottle positioner** of bottle filling equipment
AB - The utility model relates to a food liquid filling machine especially relates to the filling equipment of a filling container for bottled container. A **bottle positioner** of bottle filling equipment, it includes station after station, filling station and a set of filling before a set of filling, each station both sides of are equipped with limit side plate, the position is equipped with preceding, exhaust hood respectively between two stations in filling station and front and back, and the front and back cylinder is fixed respectively limit side plate is last, has one on its output shaft separately and passes the baffle that just in time is located both sides around the filling station behind the limit side plate, be equipped with one between two cylinders just to the photoelectric sensor of filling station. The utility model discloses job stabilization fixes a position accurately, and the noise is low.

5/30 © EPODOC / EPO

PN - [CN206199356U](#) U 20170531
PR - CN201621295692U 20161129
AP - CN201621295692U 20161129
DT - I
PA - CHENGDU CHENGNUO NEW-TECH CO LTD
TI - Supporter convenient to hold and put round bottom revolving bottle
AB - The utility model discloses a supporter convenient to hold and put round bottom revolving **bottle**, including **positioner** and the main supporter body of assembling by riser and diaphragm, the diaphragm is used for bearing the weight of the object, the riser plays the support fixed action to the diaphragm, positioner sets up on the diaphragm, is provided with the through -hole on the diaphragm, the through -hole is the cylinder type, and the surface vertical who bears the weight of the object of the axis of through -hole and diaphragm. Positioner is including the locating lever, connecting pipe and the sucking disc that connect gradually, the one end and the diaphragm of locating lever are connected, make the sucking disc can closely adsorb the spherical position of round bottom revolving bottle. The connecting pipe is for having elastic plastic tubing. Through the swivelling joint pipe, make the surface that the sucking disc can adsorb the round bottom revolving bottle, avoid the reason such as bumping because of maloperation, mistake and bump the round bottom revolving bottle fall from the supporter.

6/30 © EPODOC / EPO

PN - [CN206178497U](#) U 20170517
PR - CN201621226143U 20161115
AP - CN201621226143U 20161115
DT - I
PA - GUANGZHOU U-PACKER AUTOMATION EQUIPMENT CO LTD
TI - Dedicated **bottle end positioner** on labeller
AB - The utility model discloses a dedicated **bottle end positioner** on labeller, including positioner body, control circuit, be equipped with transfer orbit on the device body, the positioner body, the track support, the locating clip, the locating clip moves the movable rail way, the locating clip lateral wall, location folder bottom board,

location clamping rail way bottom plate, the sensor, the bottom plate screw thread, the regulation and control screw thread, the regulation and control fillet of screw, the motor shaft, including a motor, an end cap, a controller, and a cover plate, the mounting panel, inside at the mounting panel is equipped with power module, master control circuit, a data transmitting module, wireless network module, control module, a single -chip microcomputer, calculation module, sensor module, the control modul, drive module, switch the module, the present invention has reasonable design, moreover, the steam generator is simple in structure, can fix a position the bottle of different shapes, fix a position efficiently, accurate in positioning.

7/30 © EPODOC / EPO

- PN - [CN205966418U](#) U 20170222
- PR - CN20162933780U 20160825
- AP - CN20162933780U 20160825
- DT - I
- PA - EASTERN STRONG EMERGENCY EQUIPMENT TECH WUXI CO LTD
- TI - Self -rescuer rubber coating positioner
- AB - The utility model relates to a rubber coating positioner, especially self -rescuer rubber coating positioner, including base, **bottle seat positioner** and box positioner, **bottle seat positioner** and box positioner all fix on the base, and are located the both ends of base, the columniform bottle seat card of self -rescuer bottom surface is in **bottle seat positioner**, and the self -rescuer card is in box positioner, the movable positioning device slot is established on the base leading flank, and movable positioning device inserts in the movable positioning device slot, and movable positioning device is including the activity of bottle seat reference column, active connection plate and handle post, the both ends at active connection plate are fixed with the handle post to bottle seat activity reference column, bottle seat activity reference column and handle stake pocket are at last inslot, bottle seat prelocalization post is tangent with the bottle seat with a bottle back reference column, the both ends of fixing a position the platform at the box are fixed to two box reference columns, and the self -rescuer card is in two box reference columns. The device location accuracy, convenient to use, non -rickety.

8/30 © EPODOC / EPO

- PN - [CN205687529U](#) U 20161116
- PR - CN20162589554U 20160616
- AP - CN20162589554U 20160616
- DT - I
- PA - BEIJING HUALIN WEIYE PACKAGING EQUIPMENT CO LTD
- TI - Complete horizontal beetle haulage system of automatic filling machine empty bottle
- AB - The utility model relates to a complete horizontal beetle haulage system of automatic filling machine empty bottle, including PLC, still include: a main transport line, with higher speed transfer chain, double liquid filling machine, close mechanism and the 2nd main transport line, wherein, double liquid filling machine includes two rows of transfer chains, empty **bottle positioner** and pushes away a bottle subassembly with empty **bottle positioner** corresponds, and empty **bottle positioner** sets up at the output of transfer chain with higher speed, pushes away a bottle subassembly and fixes on two rows of transfer chains. The utility model discloses a great reduction of complete horizontal beetle haulage system of

automatic filling machine empty bottle area, saved the equipment resource to realized orderly filling and order output, the effectual accident of having avoided crowded bottle, having fallen the bottle has improved production efficiency.

9/30 © EPODOC / EPO

- PN - [CN205718899U](#) U 20161123
- PR - CN20162525043U 20160601
- AP - CN20162525043U 20160601
- DT - I
- PA - TIANJIN CHANGLONG HONGYE GAS EQUIPMENT CO LTD
- TI - Liquefied petroleum gas cylinder volume survey and hydrojet lubricating arrangement
- AB - The utility model relates to a liquefied petroleum gas cylinder volume survey and hydrojet lubricating arrangement, including surveying the hoisting control device who holds hydrojet pole, steel bottle elevating platform, steel **bottle positioner**, holds the hydrojet pole with the survey, survey and hold hydrojet pole position in steel bottle elevating platform top, survey the one side that holds the hydrojet pole and establish inductive switch, top are equipped with the response piece that can send unqualified detected signal, one side of hoisting control device is equipped with the magnetic switch that is arranged in controlling steel **bottle positioner** and unclamps, is arranged in to control drainage valve and opens the 2nd magnetic switch that the lubricated liquid that makes the reservoir got into the liquid storage pipe be connected with survey appearance hydrojet pole, the liquid storage pipe passes through the inflation valve and connects compressed air source. The utility model discloses when surveying the liquefied petroleum gas cylinder volume, need not personnel's operation, having improved work efficiency and processing quality, saved operating personnel, solved and originally accomplished by the manual work, the quality does not have the guarantee, and the problem of inefficiency.

10/30 © EPODOC / EPO

- PN - [CN205589633U](#) U 20160921
- PR - CN20162111652U 20160203
- AP - CN20162111652U 20160203
- DT - I
- PA - SHALLWAY PACKAGING EQUIPMENT CO LTD
- TI - Rotate **bottle** electron **positioner** of formula labeller
- AB - The utility model provides an angle stops, the auto -lock, pastes the mark station and carries out mark, and the requirement of locating pasting target is come according to set mark label pattern to final the realization, and the location expects much, and the location is accurate that rotate **bottle** electron **positioner** of formula labeller, bottle support, servo motor, belt, positional detection sensor rely on pop - jump the moving of servo motor drive bottle, positional detection sensor detects cover mark label in order to confirm that it puts to paste a scalar potential, detect behind the position servo motor drive bottle hold in the palm rotatory corresponding.

11/30 © EPODOC / EPO

- PN - [CN205419734U](#) U 20160803
- PR - CN20162192820U 20160314

AP - CN20162192820U 20160314

DT - I

PA - SICHUANKAIMING MACHINERY MFG CO LTD

TI - Continuous production's high -efficient liquid filling machine

AB - The utility model belongs to the technical field of the filling, especially, continuous production's high -efficient liquid filling machine, the utility model discloses the frame, be provided with the conveyer belt in the frame, be provided with the positioner who is used for placing the packing bottle on the conveyer belt, positioner's top is provided with and is used for carrying out the feeding device that marks for the packing **bottle**, **positioner** includes the base, it to fix a position a section of thick bamboo along a base pivoted first location section of thick bamboo and second to articulate on the base to have, the transversal half -circular arc that personally submits of a first location section of thick bamboo and a second location section of thick bamboo, the tight loop is installed to a first location section of thick bamboo and second location section of thick bamboo upper segment, a first location section of thick bamboo and a second location section of thick bamboo set up along the mutual symmetry of base, be provided with raising plate on the base, raising plate arranges the lower extreme in a first location section of thick bamboo and second location cylindric one -tenth space in, the jacking cylinder is installed to raising plate's lower extreme, raising plate, a first location section of thick bamboo and second location cylindric become to be used for the space of packet bottling.

12/30 © EPODOC / EPO

PN - [CN205419732U](#) U 20160803

PR - CN20162192818U 20160314

AP - CN20162192818U 20160314

DT - I

PA - SICHUANKAIMING MACHINERY MFG CO LTD

TI - Filling machine

AB - The utility model belongs to the technical field of the filling, especially, filling machine, the pesticide sprayer comprises a frame, be provided with the conveyer belt in the frame, be provided with the positioner who is used for placing the packing bottle on the conveyer belt, positioner's top is provided with and is used for carrying out the feeding device that marks for the packing **bottle**, **positioner** includes the base, it to fix a position a section of thick bamboo along a base pivoted first location section of thick bamboo and second to articulate on the base to have, the transversal half -circular arc that personally submits of a first location section of thick bamboo and a second location section of thick bamboo, the tight loop is installed to a first location section of thick bamboo and second location section of thick bamboo upper segment, a first location section of thick bamboo and a second location section of thick bamboo set up along the mutual symmetry of base, be provided with raising plate on the base, raising plate arranges the lower extreme in a first location section of thick bamboo and second location cylindric one -tenth space in, the jacking cylinder is installed to raising plate's lower extreme, raising plate, a first location section of thick bamboo and second location cylindric become to be used for the space of packet bottling.

13/30 © EPODOC / EPO

PN - [CN204939547U](#) U 20160106

PR - CN20152555262U 20150729

AP - CN20152555262U 20150729

DT - I

PA - HANGZHOU YUHANGZHANGSHAN STEEL CYLINDER CO LTD

TI - Liquefied gas cylinder quenching positioner

AB - The utility model relates to a steel **bottle** quenching **positioner** technical field, concretely relates to liquefied gas cylinder quenching positioner. It includes the device body, and the device body includes the base, is equipped with first locating rack and second locating rack on the base perpendicularly, be equipped with first location axle perpendicularly through slide bearing on the first locating rack, be equipped with second location axle perpendicularly through slide bearing on the second locating rack, first location axle head portion is equipped with and is used for treating location steel bottle oral area and carries out the mechanism of sealing of fixing a position, and second location axle head portion is equipped with and is used for treating the bottle end positioning mechanism who goes on fixing a position in location steel bottle bottom. It can be fixed a position liquefied gas cylinder in liquefied gas cylinder's quenching process better.

14/30 © EPODOC / EPO

PN - [CN204939532U](#) U 20160106

PR - CN20152556346U 20150729

AP - CN20152556346U 20150729

DT - I

PA - HANGZHOU YUHANGZHANGSHAN STEEL CYLINDER CO LTD

TI - A closing device for liquefied gas cylinder quenching positioner

AB - The utility model relates to a steel **bottle** quenching **positioner** technical field, concretely relates to a closing device for liquefied gas cylinder quenching positioner. It carries out the mechanism of sealing of fixing a position including being used for treating location steel bottle oral area, seals the mechanism and includes connecting portion, connecting portion one side is used for and fixes a position the hub connection, and the connecting portion opposite side is inwards sunken constructs because the lid closes the sealed chamber of position undetermined steel bottle oral area, the sealed outside convex structure in chamber middle part becomes to be used for to stretch into the sealed post of position undetermined steel bottle oral area, and lateral wall part outside extension the in sealed chamber constitutes at least one reference column. The utility model discloses can seal at the opening of liquefied gas cylinder quenching in -process to liquefied gas cylinder better.

15/30 © EPODOC / EPO

PN - [CN204936462U](#) U 20160106

PR - CN20152673043U 20150831

AP - CN20152673043U 20150831

DT - I

PA - GUANGZHOU JIUHONG PRINTING MACHINE CO LTD

TI - Circular **bottle** screw **positioner**

AB - The utility model relates to a circular **bottle** screw **positioner**, its design point lie in including: being equipped with the telescopic shaft on the seize spare, seize spare, having a compression spring between telescopic shaft and the seize spare, there is the head of chewing of a coaxial setting telescopic shaft outer end, chews to be

equipped with bearing assembly between head and the telescopic shaft for it can wind the axle center free rotation to chew the head, still be equipped with the screw fixture block on the seize spare, have the 2nd compression spring between screw fixture block and the seize spare, the screw fixture block lies in chews first side, chews first axle center and screw fixture block and is close to chewing and has the settlement interval between the first side end face, cup joints that there is the clearance in the circumference with close the chewing of screw fixture block between the first side end face chewing overhead bottleneck outside, and the clearance is lighter than bottleneck outer protruding threads's thread height on the circumference outward for the external screw thread can be stopped and rotate at the unable circumference in screw fixture block one side on the outer circumference of bottleneck. The utility model provides a but to the smooth circular **bottle** screw **positioner** who does not have setpoint bottleneck division screwed bottle in the printing prelocalization in surface.

16/30 © EPODOC / EPO

- PN - [CN204933365U](#) U 20160106
- PR - CN20152615563U 20150814
- AP - CN20152615563U 20150814
- DT - I
- PA - ZHU LIYING
- TI - Liquid shakes even machine suitable for many bottles of types
- AB - The utility model discloses a liquid shakes even machine suitable for many bottles of types, include: shaking device, the rocker of being connected with shaking device, be located the positioner of rocker one side, the fixed subassembly of being connected with positioner that is used for fixing peripheral hardware liquid **bottle**. **Positioner** includes the fixed position ring sum removable external member of fixed connection on the rocker, a section of thick bamboo is straightened including can screw removable holding ring on the fixed position ring and/or the removable location that can screw on the fixed position ring to removable external member, liquid shakes even machine still including supplementary stablize the liquid bottle plus fixing device. The utility model discloses an add removable external member on positioner, utilized the supporting use of removable external member and different liquid bottle types, made the great widen of its application scope. Simultaneously through adding plus fixing device for its liquid bottle in the use obtains the locking of many angle fixed, and the security is high. The utility model is used for it shakes evenly to carry out the content to small -size liquid bottle.

17/30 © EPODOC / EPO

- PN - [CN204871845U](#) U 20151216
- PR - CN20152691067U 20150907
- AP - CN20152691067U 20150907
- DT - I
- PA - ZHANG JUN
- TI - **Bottle positioner** of labeller
- AB - The utility model relates to a **bottle positioner** of labeller. A **bottle positioner** of labeller, includes support and locating pin, this locating pin is installed on the support through first relocation mechanism telescopically, is equipped with the circumferential location mechanism that can make locating pin circumferential location between this locating pin and the support. This circumferential location

mechanism include the direction recess that extends along the flexible direction that is on a parallel with the locating pin with stretch into in the direction recess and with this direction recess sliding fit's direction lug, one of them sets up this direction recess and direction lug on the locating pin, and another sets up on the support. This circumferential location mechanism structure is simple, and it is convenient to implement. The utility model discloses a **bottle positioner** of labeller set up circumferential location mechanism between locating pin and support so that the locating pin flexible in -process or following support pivoted in -process can not the rotation, not support rotation relatively of locating pin promptly to ensured the accurate and stable of location, the location is more firm, reliable.

18/30 © EPODOC / EPO

PN - [CN204796459U](#) U 20151125
 PR - CN20152208389U 20150404
 AP - CN20152208389U 20150404
 DT - I
 PA - UNIV YULIN; KUNSHAN RUNYA AUTO PART CO LTD
 TI - Portable newborn animal breast -feed machine
 AB - The utility model relates to a portable newborn animal breast -feed machine, it is that slant formula push handle handle is being connected at both ends around the breast -feed frame, fix the connecting rod above the breast -feed frame left and right sides, fix a plurality of feeding **bottle positioner** between connecting rod and the breast -feed frame, the detachable feeding bottle is equipped with on the feeding **bottle positioner**, six supporting legs are being connected to the bottom surface about the breast -feed frame, the lifting adjusting device who respectively is equipped with on this supporting leg, the lower extreme of supporting leg respectively is equipped with casters, connect movable location card on every casters. The utility model has the advantages that reasonable in design, simple structure, convenient operation can improve the breast -feed efficiency of newborn animal greatly.

19/30 © EPODOC / EPO

PN - [CN204796458U](#) U 20151125
 PR - CN20152208388U 20150404
 AP - CN20152208388U 20150404
 DT - I
 PA - UNIV YULIN; KUNSHAN RUNYA AUTO PART CO LTD
 TI - Newborn animal breast -feed feeding bottle
 AB - The utility model relates to a newborn animal breast -feed feeding bottle, the milk bottle comprises upper and lower two halves, and the halfbody top is equipped with the emulsion access to plant on the feeding bottle, and milk liquid control valve is being connected to the downside of halfbody under the feeding bottle, is fixing locking device on the milk liquid control valve, and the ti lian neck is equipped with rotatory screw about the feeding bottle, and the milk bottle is placed in on the feeding **bottle positioner**. The utility model has the advantages that: reasonable in design, simple structure is convenient for rinse, because the halfbody is 45 gradient under the feeding bottle, the milk source after the use is not remained in the feeding bottle.

20/30 © EPODOC / EPO

PN - [CN204776436U](#) U 20151118
 PR - CN20152421543U 20150617
 AP - CN20152421543U 20150617
 DT - I
 PA - WEI BAOQUAN
 TI - Beverage bottle corrugated paper packing carton
 AB - The utility model provides a beverage bottle corrugated paper packing carton, includes lid, box bottom, box body to and set up the beverage **bottle positioner** in the box, wherein, beverage **bottle positioner** connect the cross that constitutes by two notch plates, shut hides and reserves the special space of beverage bottle with four high platform faces of this cross, four vertical edges and corners of this cross support four vertical gap in close contact with of box body inner wall together, beverage bottle bottle base drops on on the notch mesa of this cross. Be equipped with the inner cup, the upper surface of this inner cup is horizontal plane and lid inner face in close contact with, and the lower surface comprises the connection of a plurality of curved surfaces, wherein innermost being face and beverage bottle caping face in close contact with. Box body surface course, corrugated sheet surface course, corrugated sheet body, corrugated sheet bottom that the box body is connected including the order. The center of a notch plate is equipped with the ascending little notch of opening, and the center of another notch plate is equipped with the little notch that open side down, and two notch plates appear for vertical position through their little notch sticking of each other.

21/30 © EPODOC / EPO

PN - [CN204607841U](#) U 20150902
 PR - CN20152255749U 20150424
 AP - CN20152255749U 20150424
 DT - I
 PA - SCHOTT XINKANG MEDICINE PACKAGING CO LTD
 TI - Bottle-making machine of glass control injection **bottle tub positioner** that falls
 AB - The utility model discloses a bottle-making machine of glass control injection **bottle tub positioner** that falls, including the bottle-making machine mesa, be equipped with bottle-making machine ejector pin and bottle-making machine takeover pole on the bottle-making machine mesa, be equipped with the cavity position sleeve on the bottle-making machine mesa, cavity position sleeve parcel is outside the bottle-making machine ejector pin, cavity position sleeve right side is equipped with linear bearing, be equipped with the main shaft in the linear bearing, the main shaft lower extreme is equipped with down the position circle, the main shaft upper end is equipped with the fixed length shift fork, be equipped with the pressure spring between linear bearing and the fixed length shift fork, bottle-making machine ejector pin upper end is equipped with degree of depth adjusting device, the bottle-making machine is taken over the peak of the staff end and is equipped with the rotatory head of taking over of concave formula, adopt the design of fixed length shift fork, make the station with the glass pipe to behind the takeover pole, take over the pole downstream, meet stop motion behind the fixed length shift fork, play the effect of control length, adopt the rotatory design of taking over the head of concave formula, fix a position the glass pipe through the rotatory head of taking over of concave formula, prevent at rotatory in-process to doing the centrifugation motion around the axis.

22/30 © EPODOC / EPO

- PN - [CN204508120U](#) U 20150729
- PR - CN20142836113U 20141223
- AP - CN20142836113U 20141223
- DT - I
- PA - GUANGZHOU TECH LONG PACKAGING MACHINERY CO LTD
- TI - The filling bottle advance a **bottle positioner**
- AB - The utility model relates to a filling bottle advance a **bottle positioner**, including the installation base and provide in the card bottle mechanism of installation on the base, and the roll axis of coupling on the installation base, card bottle mechanism is including card bottle groove and lie in the locating plate and the bottle layer board at card bottle groove both ends, and the roll axis lies in one side that the locating plate is close to in card bottle mechanism, locating plate one end and roll axis fixed connection, and the other end is equipped with the bottleneck shape complex bayonet socket with the filling bottle. The utility model discloses a card bottle mechanism fixes a position the filling bottle to transversely advance a bottle in-process at the filling bottle, the locating plate blocks the bottleneck of filling bottle all the time, prevent that the filling bottle from improving into bottle job stabilization nature in horizontal in-process run-off the straight. And to the body not with bottle bucket body complex filling bottle, advancing a bottle in-process, the locating plate blocks the bottleneck of filling bottle all the time, the can also prevents that the filling bottle from moving the in-process run-off the straight, makes the bottled production demand of putting the filling bottle that can satisfy multiple different bottle types simultaneously of a telescope, reduction in production cost.

23/30 © EPODOC / EPO

- PN - [CN101992940](#) A 20110330
- PNFP - CN101992940B B 20120905
- PR - CN20101518300 20101021
- AP - CN20101518300 20101021
- DT - I
- CT - (A)
[CN201559821U](#) U[]; [CN101284597](#) A[];
[CN201092476Y](#) Y[]; [CN201292154Y](#) Y[];
[FR2882737](#) A1[]; [US7331444](#) B2[]
- PA - (A B)
FEI ZHOU
- TI - (A)
Beer bottle separate delivering, sorting and discharging mechanism
- (B)
Beer bottle separating, delivering, sorting and discharging mechanism
- AB - (A)
The invention discloses a beer bottle separate delivering, sorting and discharging mechanism, which comprises a motor and a delivery chain driven by a driving wheel, wherein the delivery chain comprises a bottle spacing delivery chain arranged on the upper layer and a bottle clamping delivery chain arranged on the lower layer; counter weight bottle falling straighteners are arranged under bottle falling wells of the bottle spacing delivery chain; a horizontal bottle discharge positioning sorting device is arranged under the last-stage counter weight rocker of

the counter weight bottle falling straighteners; and the bottle discharge holes of the horizontal bottle discharge positioning sorting device correspond to the bottle clamping delivery chain arranged on the lower layer. Beer bottles are distributed and delivered on antiskid chains through the bottle spacing delivery chain, and fall into mutually independent counter weight bottle falling straighteners at dispersed bottle falling wells, so the glass bottles are prevented from being blocked and collided so as not to generate broken bottles. When the beer bottles fall into the counter weight bottle falling straighteners, the beer bottles flexibly fall under the gravity buffer action of counter weight rockers, and are prevented from falling in a skew way and in a way of deviating from the center; and the bottle discharge hole is adjusted by a horizontal **bottle** discharge **positioner** and a positioning adjustor, so that the beer bottles can accurately fall into a bottle clamping groove, and are clamped to be delivered to the next production line.

- (B)

The invention discloses a beer bottle separate delivering, sorting and discharging mechanism, which comprises a motor and a delivery chain driven by a driving wheel, wherein the delivery chain comprises a bottle spacing delivery chain arranged on the upper layer and a bottle clamping delivery chain arranged on the lower layer; counter weight bottle falling straighteners are arranged under bottle falling wells of the bottle spacing delivery chain; a horizontal bottle discharge positioning sorting device is arranged under the last-stage counter weight rocker of the counter weight bottle falling straighteners; and the bottle discharge holes of the horizontal bottle discharge positioning sorting device correspond to the bottle clamping delivery chain arranged on the lower layer. Beer bottles are distributed and delivered on antiskid chains through the bottle spacing delivery chain, and fall into mutually independent counter weight bottle falling straighteners at dispersed bottle falling wells, so the glass bottles are prevented from being blocked and collided so as not to generate broken bottles. When the beer bottles fall into the counter weight bottle falling straighteners, the beer bottles flexibly fall under the gravity buffer action of counter weight rockers, and are prevented from falling in a skew way and in a way of deviating from the center; and the bottle discharge hole is adjusted by a horizontal **bottle** discharge **positioner** and a positioning adjustor, so that the beer bottles can accurately fall into a bottle clamping groove, and are clamped to be delivered to the next production line.

24/30 © EPDOC / EPO

PN - [US7856860](#) B1 20101228

PR - US20080214440 20080619

AP - US20080214440 20080619

DT - *

CT - [US1840428](#) A []; [US2343006](#) A [];
[US2349502](#) A []; [US2366775](#) A [];
[US4987722](#) A []; [US5857376](#) A [];
[US6386013](#) B1 []

CCI - [B21D51/48](#)

TI - Bottle cap flattener and method for flattening bottle caps

AB - The present invention in one embodiment is a device and method for flattening bottle caps from beverage containers. In a preferred embodiment of the invention, the bottle cap flattener includes a **bottle** cap **positioner**, a bottle cap holder, a bottle cap flattening tool, a motor and a positioning jig. The **bottle** cap **positioner** precisely locates a bottle cap so that the bottle cap flattening tool can interact with the bottle

cap to flatten the bottle cap **bottle cap positioner** preferably includes a rotatable disk that is rotated by the motor. The bottle cap flattening tool applies pressure to a bottle cap through a tip to force the outer portion of the bottle cap into a flattened configuration along with the central portion of the bottle cap. The bottle cap holder applies force to a bottle cap located on the **bottle cap positioner** to hold the bottle cap in a precise relationship with the **bottle cap positioner**. Where the **bottle cap positioner** includes a rotating disk, the bottle cap holder applies force to a bottle cap located on the disk to hold the bottle cap on the disk. The positioning jig precisely locates the bottle cap on the friction surface of the disk so that the bottle cap can be acted on by the bottle cap flattening tool.

25/30 © EPODOC / EPO

- PN - [CN201485062U](#) U 20100526
- PR - CN20092192036U 20090828
- AP - CN20092192036U 20090828
- DT - I
- PA - FEI ZHOU
- TI - Rotary chain-plate standing type bottle strengthening machine
- AB - The utility model discloses a rotary chain-plate standing type bottle strengthening machine, which comprises a drive motor, a gearbox, a driving wheel and a conveyor belt. Two drive chains for a rotary link joint are arranged between two bottle discharging conveyor belts; the middle part between the two drive chains for the rotary link joint is provided with a bottle supporting plate having two inclined planes; each inclined plane of the bottle supporting plate is provided with guide rails which change in height with the inclined plane; the rotary link joint which moveably contacts the guide rails changes from a horizontal position into a vertical position along the orientation of the guide rails; the head part of the rotary link joint is provided with a bottle-falling straightening machine which ensures that a bottle exactly falls into a **bottle positioner**; and a baffle which makes the bottle stand is arranged on the outside of the bottle discharging conveyor belt. The rotary chain-plate standing type bottle strengthening machine has the advantages that: the problem that glass bottles cannot stand quickly on the assembly line during the running is solved; the drive chain for the rotary link joint as the conveyor belt to avoid bottle crushing and blockage; operation is carried out continuously and effectively at a high speed; space, energy consumption and labor are saved; and labor productivity and economic benefits are improved greatly.

26/30 © EPODOC / EPO

- PN - [CN201468522U](#) U 20100519
- PR - CN20092193813U 20090827
- AP - CN20092193813U 20090827
- DT - I
- PA - HANXIONG WEN
- TI - Rack
- AB - The utility model relates to a rack, which comprises a rack body and a **bottle body positioner**, the **bottle body positioner** comprises a positioning ring and a positioning plate, the positioning plate is provided with a through-hole running from top to bottom, the periphery of the back of the positioning plate is provided with notches; the centre of the positioning ring is provided with holes for banding and covering the bottle body, the periphery of the hole is provided with a plurality of

positioning sheets, the adjacent positioning sheets are separated, the root part of each positioning sheet integrates with the positioning ring, the head part of each positioning sheet is a free end, the periphery of the outer ring of the positioning ring is provided with a connecting piece, the positioning ring is arranged in the through-hole of the positioning plate through the connecting piece; the positioning plate is clamped to the rack through the notch, then the positioning plate and the rack are locked tightly through an elastic block. The utility model has reasonable design, the **bottle body positioner** is convenient for putting into and pulling out the bottle body, the **bottle body positioner** is suitable for storing the bottle body with various size, and can perfectly banding and covering the bottle body, the bottle body does not swing in a moving process, and the **bottle body positioner** can conveniently be arranged on the rack.

27/30 © EPODOC / EPO

- PN - [DE4125666](#) C1 19921203
- PR - DE19914125666 19910802
- AP - DE19914125666 19910802
- DT - *
- CT - [DE2903470](#) C2 []; [DE2731769](#) A1 [];
[FR1474383](#) A []
- CCI - [B65G47/244](#) ; [B65C9/06](#)
- TI - **Bottle aligner positioner** turret head - has concentric rim plates recessed to hold conveyed bottle with guides on each plate riding over surface fixed concentric to turret
- AB - The head has concentric rotating rim plates recessed to hold the conveyed bottles using a two position rotor to roll the plate round into the next turret position in response to scanner signals such that all plate mounted bottles are aligned as they reach the next turret position. Guides (16) on each plate (12) should ride a guide surface (40) fixed concentric to the turret (10) so as to keep their plate in the selected rotated position relative to the turret. Guide elements fitted to the plates close up gaps in the guide surface (40) only when the bottles (1) are correctly aligned in the first plate setting so that plate moves in without turning. Otherwise with incorrect bottle attitude the guide element fails to make contact with the plate guide (16) so the rotor engages the plate and turns it into its next setting round the turret etc.. USE/ADVANTAGE - Bottling etc. plants. Automatic bottle alignment between first and second plate positions guards against de-alignment by strict plate rotation control.

28/30 © EPODOC / EPO

- PN - [CN2870765Y](#) Y 20070221
- PR - CN20062101744U 20060316
- AP - CN20062101744U 20060316
- DT - I
- PA - XU TIANSONG [CN]
- TI - Flushing aspirator
- AB - This utility model relates to an automatic washing and sucking pump for the use of abdominal surgery, which consists of a chassis, a dropping bottle, an apocenosus needle and a suction bottle. A positive pressure interface, a negative pressure interface, a power switch, a dropping **bottle positioner** and a suction **bottle positioner** are arranged inside the chassis. A non-oily lubrication piston pump, a

positive pressure electromagnetic pump, a negative pressure controller, a positive pressure controller and a muffler are arranged inside the chassis. The non-oily lubrication piston pump and the negative pressure controller are connected together by channels and then these two parts are connected with negative pressure interface. The positive electromagnetic pump and the positive pressure controller are connected together by channels and then these two parts connected with the positive pressure interface. The muffler is connected with the non-oily lubrication piston pump. The utility model integrates washing apparatus and suction apparatus together. The washing and sucking operation can be carried out automatically and thus shorten operation time. Moreover, it is equipped with a muffler so as to lower noise and create a better work environment for doctors.

29/30 © EPODOC / EPO

- PN - [CN2557424Y](#) Y 20030625
- PR - CN2002224132U 20020523
- AP - CN2002224132U 20020523
- DT - I
- PA - HENGYANG QIANSHAN PHARMACEUTIC [CN]
- TI - **Bottle** mouth **positioner** for pouring machine
- AB - The utility model discloses a **bottle** mouth **positioner** for pouring machine to obtain a highly-reliable device. The machine can pour liquid and semiliquid into a bottle and comprises a nozzle needle fixing plate 7. The utility model is characterized in that the nozzle needle fixing plate 7 is provided with a sleeve 4 which is provided with a compression spring 5 inside, a bolt 1, a stud 2, a nut 3 and a mandril 6; wherein the bolt 1, the stud 2 and the nut 3 are positioned at the upper end of the sleeve; the mandril 6 is positioned at the lower part of the sleeve; a parallelogram mechanism which consists of an upper moveable board 10, a lower moveable board 12 and two rockers 9 is arranged below the mandril and hinged on a fixing board 8; and the parallelogram mechanism is connected with a trolley 11, a left position wheel 14, a right position wheel 15 and a tension spring 13 and a limit screw arranged on the fixing board. The device is widely used for the packing operation of medicine, food and cosmetic line etc.

30/30 © EPODOC / EPO

- PN - [CN1347832](#) A 20020508
- PR - CN2001139706 20011128
- AP - CN2001139706 20011128
- DT - I
- PA - DAI DE GUANG [CN]
- TI - Liquid filling glass **bottle positioner** inside packing case
- AB - The liquid-filling glass **bottle positioner** inside packing case includes tray with separated positioning grooves and top plate with separated limiting holes in the size different that of the positioning grooves. The positioner is made of low-foam polyethylene-propylene material. It can avoid the collision of bottles and the friction of the labels and this improve the packing quality.

[EPODOC: SS 3] /ic B65B35/56

de.bertelsmann.patents.protocol.client.ConnectionException: de.bertelsmann.patents.protocol.generic.
exception.ProtocolException: java.net.SocketTimeoutException: Read timed out



New connection on: : 18-04-2018 : 04:30:52 - Last disconnection on: :
18-04-2018 : 04:30:52

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

Welcome to EPOQUE Rebuild under the Production Environment

[EPODOC: SS 3] /ic B65B35/56

Results in EPODOC **4.091**

[SS 4]

[SS 4] /ic B65B35/56 or B65D71/16 or B67B3/04 or B08B9/28 or B08B9/42 or B08B9/32

Results in EPODOC **11.801**

[SS 5] **bottle and wash**

Results in EPODOC **1.812**

[SS 6] **4 and 5**

Results in EPODOC **102**

[SS 7] **position and 6**

Results in EPODOC **14**

[SS 8] ..li



1/14 © EPODOC / EPO

PN - [CN205551032U](#) U 20160907

PR - CN20162118983U 20160204

AP - CN20162118983U 20160204

DT - I

PA - TIANJIN LANDAI COSMETICS ENV PROT TECH DEV CO LTD

TI - **Bottle** -type container outer wall belt cleaning device

AB - The utility model provides a **bottle** -type container outer wall belt cleaning device, including **bottle** -feeding device, **wash** -**bottle** device, drying device and the conveyer who sets gradually, **bottle** -feeding device includes the basin, and first action wheel

is connected through first belt to the output shaft of first motor, and first action wheel and first follow driving wheel pass through the second belt to be connected, second belt surface is equipped with puts a **bottle** recess, the setting of first follow driving wheel is in the basin, and first action wheel **position** is higher than the first driving wheel of following, the **wash -bottle** device is equipped with the washing shower nozzle including establishing a plurality of round brushes in the conveyer belt top between, conveyer is the rotatable drum of one row of inseparable range. A **bottle** -type container outer wall belt cleaning device can reduce the broken **bottle** rate of using the automation equipment to **wash bottle** -type container, prevent to appear polluting in the cleaning process, reduce manufacturing cost, work efficiency is high, accords with the production technology requirement, can reach national hygienic standard.

2/14 © EPODOC / EPO

- PN - [CN204866773U](#) U 20151216
- PR - CN20152514964U 20150715
- AP - CN20152514964U 20150715
- DT - I
- PA - HANGZHOU JIUDIJIU LIQUOR INDUSTRY CO LTD
- TI - Automatic **wash** beverage **bottle** equipment
- AB - The utility model relates to an automatic **wash** beverage **bottle** equipment, including initiative rotary teeth rim plate and driven rotary teeth rim plate, initiative rotary teeth rim plate is connected with power device, and initiative rotary teeth rim plate passes through the chain to be connected with the meshing of driven rotary teeth rim plate, and every certain distance is provided with and inserts the frame on the chain, inserts the frame and is inverted circular truncated cone for insert the beverage **bottle** in that insert that the frame is gone up and feasible open side down, be provided with the apopore on driven rotary teeth rim plate for inserting to put up to place and moving rotary teeth rim plate department, the **position** of apopore is just to the beverage **bottle** opening. The beneficial effects of the utility model are that: adopt inserting the frame and setting up on the chain of round platform shape, be provided with the apopore on the driven rotary teeth rim plate for inserting to put up to place and moving rotary teeth rim plate department, the **position** of apopore is just to the beverage **bottle** opening, thereby reach the purpose of wasing the beverage **bottle**, it is practical convenient, and efficient sanitization.

3/14 © EPODOC / EPO

- PN - [CN202290685U](#) U 20120704
- PR - CN20112380665U 20111010
- AP - CN20112380665U 20111010
- DT - I
- PA - ANHUI NEW WORLD OASIS TEA OIL CO LTD
- TI - Adjustable **bottle** washing machine
- AB - The utility model discloses an adjustable **bottle** washing machine, which comprises an annular groove. A turntable is installed in the annular groove in a rotating mode, a plurality of support tubes are fixedly installed on the turntable, and the top end of each support tube is a conical structure. An arc-shaped cushion block is installed on the inner groove wall of the annular groove and extends out of the annular groove, a casing with adjustable vertical height is installed on the arc-shaped cushion block, and a plurality of spray nozzles are arranged at the **position** of the

The adjustable decreasing right facing the turntable **bottle** washing machine further comprises a flexible tube which extends into the annular groove, penetrates through the turntable and extends into the support tubes on the turntable. The adjustable **bottle** washing machine can spray and **wash** the inner wall and the outer wall of a **bottle** at the same time, is convenient to operate, time-saving and labor-saving and can perform spraying and washing to bottles with different height at the optimum height, and simultaneously the spraying height is adjustable.

4/14 © EPODOC / EPO

- PN - [US5425385](#) A 19950620
- PR - US19930090595 19930712
- AP - US19930090595 19930712
- DT - **
- CT - [US2967531](#) A []; [US3240216](#) A [];
[US3311500](#) A []; [US3587597](#) A [];
[US3614958](#) A []; [US4295503](#) A [];
[US4834123](#) A []; [US4917296](#) A [];
[US5135014](#) A []; [US5277207](#) A [];
[DE635493](#) C []
- CCI - [B08B9/32](#) ; [B08B9/34](#) ; [B08B9/426](#)
- PA - PEPSICO INC [US]
- TI - Rotary washer spraying system
- AB - A control system for a high-speed rotary washer spraying system designed particularly for plastic returnable bottles automatically regulates each process of the **wash** spraying system, namely, sequentially feeding bottles from an infeed conveyor means, inverting them by a worm/inverter means, receiving and simultaneously rotating each **bottle** in an inverted **position** through a plurality of washing, neutralizing and sanitizing treatment zones, and inverting each **bottle** to its original neck-up orientation for further processing. During the entire process, a programmable logic controller maintains, manages, and controls all pumps, valves, solenoids, and drive motor speeds as required by the process, and also provides for monitoring and adjusting fluid levels, alkalinity/acidity concentrations, and temperatures of the **wash** and neutralizing solutions. Alarm conditions that may present themselves during the washing, neutralizing, and sanitizing processes are flagged for human intervention, interaction, or acknowledgement. Such alarm conditions are out of range: fluid flow, temperature, pressure, conductivity and/or pH, fluid levels, and carousel and **bottle** RPM. The control system also includes specialized checks for clogged spray nozzles, and out of **position** fluid lances.

5/14 © EPODOC / EPO

PN - [US5441063](#) A 19950815

PR - US19930090503 19930713

AP - US19930090503 19930713

DT - *

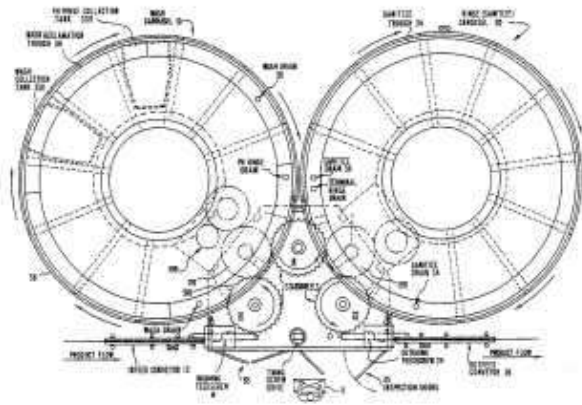
CT - [US721824](#) A[]; [US813144](#) A[];
[US908446](#) A[]; [US934870](#) A[];
[US1055220](#) A[]; [US1598175](#) A[];
[US3240216](#) A[]; [US3563256](#) A[];
[US3614958](#) A[]; [US4051805](#) A[];
[US4509543](#) A[]; [US4683009](#) A[];
[US4803055](#) A[]; [FR71886E](#) E [];
[DE1457007](#) A1 []

CCI - [B08B9/426](#) ; [B08B9/32](#) ;
[B08B9/34](#)

PA - PEPSICO INC[US]

TI - High speed **bottle** washing machine

AB - A high-speed **bottle** washing machine provides concurrent rotational motion to a workpiece as it is conveyed through a washing treatment zone for internal and external spray treatments. The machine comprises a plurality of moving **bottle** receiving stations for sequentially receiving and rotating inverted bottles received from a **bottle** infeed conveyor, a plurality of reciprocating spray nozzles, with at least one spray nozzle moving with each **bottle** receiving station, wherein each of the spray nozzles reciprocates from a first **position** below the inverted bottles, to a second **position** within the bottles, and a manifold assembly for sequentially supplying a caustic **wash** fluid under pressure to each



of the plurality of spray nozzles to clean the bottles by impingement of the **wash** fluid in a predetermined pattern within the bottles as the bottles are rotated. The washed bottles are finally discharged at a **bottle** outfeed conveyor.

6/14 © EPODOC / EPO

PN - [JPH10151425](#) A 19980609

PNFP - JP3709635B B2 20051026

PR - JP19960327733 19961122

AP - JP19960327733 19961122

DT - I

FI - B08B9/32; B65G47/91&D; B67C7/00

FT - 3B116/AA22; 3B116/AB17; 3B116/AB23; 3B116/AB27; 3B116/AB44; 3B116/BB22; 3B116/BB33; 3B116/CD43; 3E079/FF03; 3E079/FF16; 3E079/GG01; 3F072/AA08; 3F072/GC03; 3F072/GE01; 3F072/GG00; 3F072/HA10; 3F072/JA03; 3F072/KC01; 3F072/KD01; 3F072/KD12; 3F072/KD17

PA - (A)
SHIBUYA KOGYO CO LTD

TI - (A)
WASHING DEVICE FOR VESSEL

AB - (A)
PROBLEM TO BE SOLVED: To efficiently and surely **wash** the base of a vessel.
SOLUTION: Vessels 2 carried by a carrier conveyor are delivered to an inlet star wheel 10 rotated synchronously with an in-feed screw at an interval with a prescribed pitch via the in-feed screw. The vessels 2 rotated and carried by the inlet star wheel 10 are moved while the bases 2a are supported by a ferry plate 12 arranged in the lower part. The vessels 2 are supplied from the star wheel 10 to the **bottle** gripper 18 of a rotor and thereafter turned over and become a handstand state to perform washing and hydro-extraction. A **bottle** base washing mechanism 26 for injecting washing water on the bases 2a of the vessels 2 is provided on the downstream side of the ferry plate 12 and on the upstream side of the **position** starting reversion. Washing water is injected toward the bases 2a of the vessels 2 standing up straightly from the lower part in the vertical direction and washing is performed.

7/14 © EPODOC / EPO

PN - [GB679293](#) A 19520917

PR - GB19500014866 19500614

AP - GB19500014866 19500614

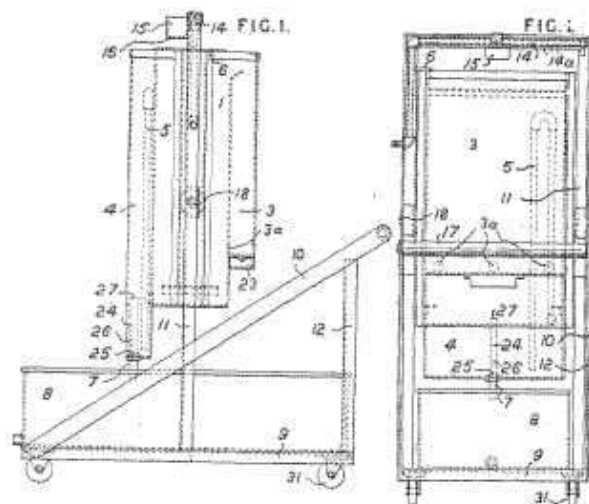
DT - *

CCI - [B08B9/28](#) ; [A47L15/28](#)

PA - BOOTS PURE DRUG CO LTD

TI - Improvements in and relating to washing apparatus for bottles, jars and other hollow-ware and hollow cylindrical vessels and articles

AB - 679,293. Washing bottles and the like. BOOTS PURE DRUG CO., Ltd. June 13, 1951 [June 14, 1950], No. 14866/50. Class 138 (i). Relates to washing apparatus for bottles and the like in which a washing tank is subjected to an oscillating or swinging movement by an accumulation of water first on one side and then on the other side externally of the tank, the water first entering the tank. A tank unit, Fig. 1, comprising the washing tank 1 and ballast tanks 3 and 4 on opposite sides of the tank 1 is pivoted at 18 within uprights 11 of a stand comprising, a base 9 provided with wheels 31, uprights 12 and inclined members 10. The uprights 11 and 12 are joined by crossbars while the members 10 are joined by a roller 17. The tank 3 communicates with the tank 1 by apertures 3a while the tank 1 is connected to the tank 4 by a syphon 5. The tank 4 has a drain pipe 7 connected to a sink or as shown, communicating with a tank 8 carried by the base 9. A pipe 24 is provided over the drain pipe 7. The pipe 24 is provided around its base with small holes 25, above its base with a hole 26 while its upper end 27 is open and of

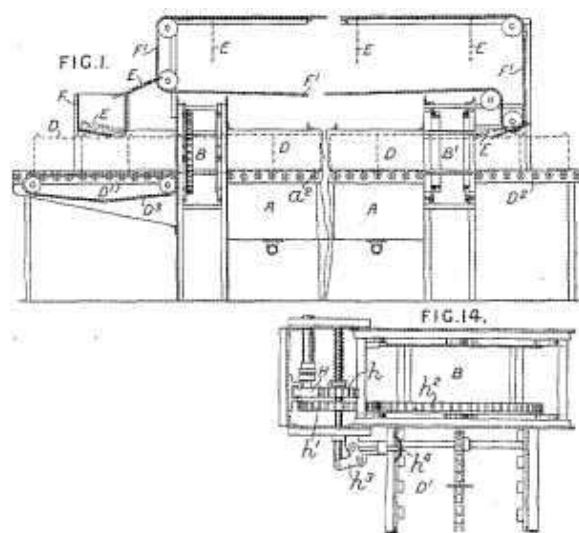


such a size so that its rate of discharge is the same as the rate at which the syphon discharges. The tank unit is balanced when empty so as to be in a vertical **position**. Hot water is supplied from an overhead pipe 14 through apertures 14a, Fig. 2, into the tank 1 and is suitably controlled to allow a sequence of operations. A drip cup 15 with outlet 16 is provided above the tank 1 for any cleansing liquid which may be used. In operation when water is supplied to the tank 1 the level therein rises so that water enters the tank 3 through the apertures 3a. The water in the tank 3 then causes the balance of the tank unit to be upset and so the unit swings to the right of Fig. 1. The water rises in both tanks 1 and 3 to cover bottles positioned normally in horizontal positions in wire mesh holders within the tank 1. Owing to the swing of the unit to the right the bottles are inclined so that they are filled as the water rises in the tanks 1 and 3. When the level rises to the top of the syphon 5 syphoning of the water occurs and the tanks 1 and 3 are gradually emptied into the tank 4. Water begins to build up in the tank 4 owing to the smallness of the holes 25. When the water level reaches the hole 26 it escapes more quickly but still at a slower rate than the syphoning rate. When the level reaches the opening 27 the water discharges at the same rate as the syphoning rate. In time the water in the tank 4 will cause the tank unit to overbalance and swing to the left of Fig. 1. The water

then flows out of the now oppositely inclined bottles. Finally when the tank 4 is completely emptied the tank unit returns to the vertical **position** and the sequence of operations again commences if the water supply is still running. During this sequence of operations the water serves also to **wash** the outsides of the bottles and to remove labels and foil therefrom. The swinging movement of the tank unit is limited by hinged stops 6. In order to load or unload the **bottle** holders the stops are swung out of the way and the tank unit swung to a substantially horizontal **position** in which it rests on the crossbar of the uprights 12. The holder may then be loaded or unloaded over the roller 17. Balancing correction for the tank unit is provided. One example is by means of a receptacle 23 to contain sand. The time of swinging can be controlled by varying the length of the fitting. An alternative loading and unloading means is also disclosed.

8/14 © EPODOC / EPO

- PN - [GB290037](#) A 19280510
 PR - GB19270012269 19270507
 AP - GB19270012269 19270507
 DT - *
 CCI - [B08B9/42](#)
 PA - ARTHUR GUY ENOCK
 TI - Improvements in the handling of bottles and crates in **bottle** washing machines
 AB - 290,037. Enock, A. G. May 7, 1927. Bottles, washing.-A machine for washing bottles in their crates without the necessity of first inverting



them by hand comprises a device for inverting a standard crate of bottles, a "tunnel" washing machine through which the bottles travel mouth downwards, and a reinverter at the delivery end. The crates D of dirty bottles are fed one at a time on a roller conveyer D<1> by an intermittently driven band D<3> beneath a casing F which delivers on to each crate a grid E designed to prevent the bottles falling out when inverted. The crate then enters a rotary inverter B operated by hand or mechanically to invert the crate with the grid upon it, and thence passes over the **wash** troughs A on rollers a<2>, being urged forward by succeeding crates. Finally it is reinverted by a similar inverter B<1> and delivered by a conveyer D<2>, the grids being removed by hooks on a conveyer band F<1> and returned to the casing F. In modifications, the separate grids are dispensed with and the bottles are retained in their crates over the **wash** troughs A by travelling grids in the form of transverse rods and chains or links, or of pivoted framegrids, and flat-sided sprockets. Dead plates from the inverter guide the bottles on to the grids. In another modification, a fixed longitudinal grid is arranged above the rollers a<2>. In an automatic arrangement, Fig. 14, for rotating the inverter by the pressure of the oncoming crate, the inverter is driven by a toothed rim h<2>, pinions h<1>, h, and a rack bar H. The pinion h is normally held from engagement with the rack H by a spring, but is

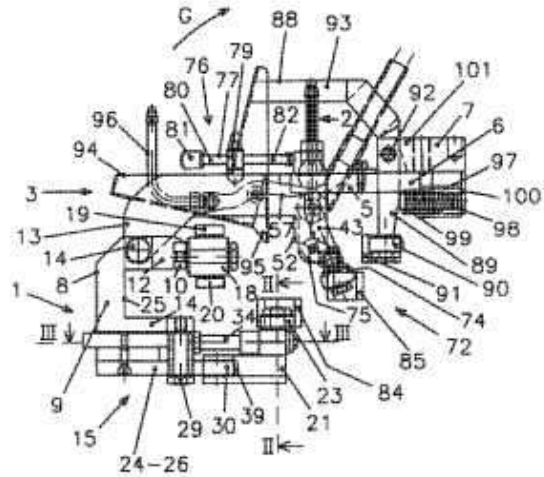
forced into engagement by a bellcrank lever h<3> and push rod h<4> adapted to be engaged by the advancing crate. In a modification of this arrangement, the forward section of the conveyer D<1> is pivoted and linked to the lever h<3> so that the weight of the advancing crate forces the pinion h into engagement with the rack H. A spring stop may be used to hold the inverter in upright or inverted **position**. A cooling device may be provided at the delivery end of the reinverter B<1>.

9/14 © EPODOC / EPO

- PN - [FR2782660](#) A3 20000303
- PR - FR19980010942 19980901
- AP - FR19980010942 19980901
- DT - *
- CCI - [A47L15/0068](#) ; [B08B3/00](#) ; [B08B3/02](#) ; [B08B9/32](#)
- PA - PERNETFRANCK [FR]
- TI - Automatic washer for bottles, in batches, comprises 6-**position** rotary **bottle**-holder with interior **wash** nozzles, successively pausing opposite fixed exterior **wash** nozzles
- AB - The bottles, individually rotating, are fixed in a circle on the **bottle**-holder. Each is entered centrally by a rotating post carrying a nozzle which directs a powerful **wash**-water jet radially as it rises inside the **bottle**. The rotating holder brings each **bottle** in turn opposite an array of 4 nozzles, remaining stationary while their jets completely cleanse the **bottle** exterior. The equipment is contained in a closed plastic case having a reservoir for the **wash**-water, in which sterilizing tablets are dissolved, and another compartment occupied by the mains-fed electric drive-motor and switchgear and an electronic controller and timer, which also operate an informative visual display and audible annunciator.

10/14 © EPODOC / EPO

- PN - [EP0822013](#) A1 19980204
- PR - WO1997ES00039
19970220; ES19960000399
19960221
- AP - EP19970904464 19970220
- DT - **
- CCI - [B08B9/32](#) ; [B08B9/426](#)
- PA - IND SICMA S L [ES]
- TI - **BOTTLE WASHING DEVICE FOR ROTARY MACHINES**
- AB - The mechanism forms one of the radial arms of a **bottle** washing carousel. The gripping device (1) comprises two grips (15) symmetrical with rotating base unit (8) which hold the neck of the **bottle**. Guide roller (18) situated between concentric guides (19,20) causes rotation of mechanism (1) to invert the **bottle** over nozzle (96). Valve (2) compresses a flexible tube passing through the valve to control flow of **wash** liquid from nozzle (96). The liquid falls into tray (94), and is collected by one or more suction nozzles fixed to guide (20) to dip into the tray when holding mechanism (1) is rotated. The bottles are again inverted and the grips released on reaching the exit **position** USE/ADVANTAGE: In industrial bottling plants for washing new bottles, before filling. Excessive grip pressure on the **bottle** and loss of precision due to wear of components in use are avoided.



PN - [EP0634230](#) A1 19950118

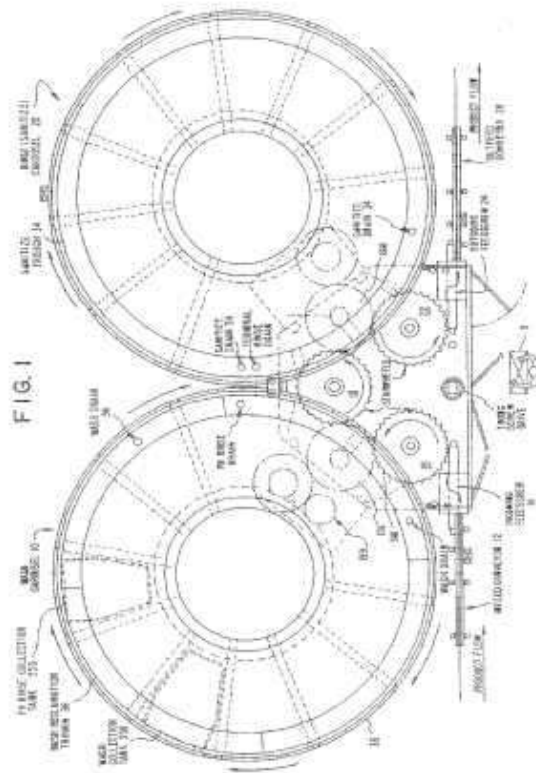
PNFP - [EP0634230](#) B1 19981223

PR - [US19930090413](#)
 19930712; [US19930090411](#)
 19930712; [US19930090501](#)
 19930713; [US19930090503](#)
 19930713

AP - [EP19940110834](#) 19940712

DT - *; Rep

CT - || STSE (A1)
[FR408950](#) A 19100408
 [YA] (FRED PENNY[GB], et al)
 [Y] 1,5,7,14-17
 * the whole document *
 [A] 2-4,6,10,20,44-50,60-64,76,77,82;
[GB377444](#) A 19320728
 [YA] (RALPH WALDO WEBSTER)
 [Y] 1,5,7,14-17
 * page 2, line 22 - page 3, line 29 *
 [A] 11,12,60-64,76,77;
[DE492206](#) C 19300220
 [A] (ALBERTSCHNEDLER)
 [A] 1,30,59
 * figures 1-3; claim 1 *;
[EP0180706](#) A2 19860514
 [A] (ENOMECSRL[IT])
 [A] 1-3,11,15-22,30,31,36-40
 * page 6, line 23 - page 7, line 10 *
 * page 10, line 22 - page 11, line 28 *;
[DE3316405](#) A1 19841108
 [A] (LUDWIG BRUECHER GMBH & CO KG [DE])
 [A] 1-4,20-23,30,34-36,41,43,51,52
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[DE4016950](#) A1 19911128
 [A] (SILBERZAHNHELMUT[DE])
 [A] 15-19,27,30,37-40,56,81
 * column 3, line 6 - line 24 *;
[JPH02131570](#) A 00000000 [A];
[JPH03114503](#) A 00000000 [A];
[US4442934](#) A 19840417
 [A] (DORF ARTHUR L[US], et al)
 [A] 25,27,54-56
 * abstract *;
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	[A] (RAYMOND CARLSON CARL, et al) [A] 1,30,59 * column 5, line 55 - column 6, line 26 *; FR991641 A 19511008 [A] (R. DÉTREZ) [A] 5-9,46-50,60-64 * figures 1-4; claims 1-3 *
CTNP	- STSE (A1) [A] - PATENT ABSTRACTS OF JAPAN, (19900802), vol. 14, no. 356, Database accession no. (C - 745), [A] 1,25,26,28-30,54,55 * abstract * [A] - PATENT ABSTRACTS OF JAPAN, (19910806), vol. 15, no. 306, Database accession no. (C - 856), [A] 11-13,76,77 * abstract *
CCI	- B08B9/32 ; B08B9/34 ; B08B9/426
PA	- (A1 B1) PEPSICO INC [US]
TI	- (A1) High speed bottle washing machine and nozzle spray assembly. - (B1) High speed bottle washing machine and nozzle spray assembly
AB	- (A1) A high-speed bottle washing machine provides concurrent rotational motion to a workpiece as it is conveyed through a washing treatment zone for internal and external spray treatments. The machine comprises a plurality of moving bottle receiving stations for sequentially receiving and rotating inverted bottles received from a bottle infeed conveyor, a plurality of reciprocating spray nozzles, with at least one spray nozzle moving with each bottle

receiving station, wherein each of the spray nozzles reciprocates from a first **position** below the inverted bottles, to a second **position** within the bottles, and a manifold assembly for sequentially supplying a caustic **wash** fluid under pressure to each of the plurality of spray nozzles to clean the bottles by impingement of the **wash** fluid in a predetermined pattern within the bottles as the bottles are rotated. The washed bottles are finally discharged at a **bottle** outfeed conveyor. <IMAGE>

- 12/14** © EPODOC / EPO
- PN - [EP0636427](#) A1 19950201
- PR - US19930090595 19930712
- AP - EP19940110832 19940712
- DT - *; Rep
- CT - || STSE (A1)
[DE3911781](#) A1 19901025 [A] (TILL GEA GMBH & CO [DE])
 [A] 1-3,8-15,19-21
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[EP0180706](#) A2 19860514 [A] (ENOMECS SRL [IT])
 [A] 1-3,14,22-24
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 * page 10, line 22 - page 11, line 28 *;
[EP0577568](#) A1 19940105 [PA] (AVE SPA [IT])
 [PA] 1,14,25-27
 * column 1, line 18 - column 2, line 23 *;
[US5135014](#) A 19920804 [A] (BESWICK FRANK [US])
 [A] 1,3,12,14,15
 * column 10, line 16 - line 66 *;
[DE3316405](#) A1 19841108 [A] (LUDWIG BRUECHER GMBH & CO KG [DE])
 [A] 1,29-31
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[FR408950](#) A 19100408 [A] (FRED PENNY [GB], et al)
 [A] 1
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[DE3120603](#) A1 19821223 [A] (HOLSTEIN & KAPPERT MASCHF [DE])
 [A] 1,2
 * claims 1-3 *
- CCI - [B08B9/32](#) ; [B08B9/34](#) ; [B08B9/426](#)
- PA - PEPSICO INC [US]
- TI - Control system for rotary **bottle** washing machines.

AB - A control system for a high-speed rotary washer spraying system designed particularly for plastic returnable bottles (11) automatically regulates each process of the **wash** spraying system, namely sequentially feeding bottles from an infeed conveyor means (12), inverting them by a worm/inverter means (14), receiving and simultaneously rotating each **bottle** (11) in an inverted **position** through a plurality of washing, neutralizing and sanitizing treatment zones, and inverting each **bottle** to its original neck-up orientation for further processing. During the entire process, a programmable logic controller maintains, manages, and controls all pumps, valves, solenoids, and drive motor speeds as required by the process, and also provides for monitoring and adjusting fluid levels, alkalinity/acidity concentrations, and temperatures of the **wash** and neutralizing solutions. Alarm conditions that may present themselves during the washing, neutralizing, and sanitizing processes are flagged for human intervention, interaction, or acknowledgement. Such alarm conditions are out of range: fluid-flow, temperature, pressure, conductivity and/or pH, fluid levels, and carousel and **bottle** RPM. The control system also includes specialized checks for clogged spray nozzles, and out of **position** fluid lances.

<IMAGE>

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PN - [CN2635233Y](#) Y 20040825

PR - CN2003269624U 20030625

AP - CN2003269624U 20030625

DT - I

PA - HUABEI PHARMACEUTICAL GROUP CO [CN]

TI - Flushing device of **bottle** washing machine

AB - The utility model discloses a **bottle** washing machine washing device, which comprises a water pipe and a whiff tube; wherein, the water pipe and the whiff tube are fixed on the device body through a positioning rack; the bottom of the water pipe and the whiff tube are provided a water inlet and an air inlet; the improvement is that the top of the water pipe is cut a axial long spray slot. The utility model changes the point spray into long slot spray. As the water coming from the long spray slot has a reversed waterfall plane with no clearance, therefore, in the no clearance water flow spray plane, part of water will always spray into the **bottle** mouth to clean the **bottle** no matter the **position** of the **bottle** staying in the upper **bottle**-turn-over-rail is front or back. The experiment shows that the **wash** rate is increased from 84.2% to 99.6% by the utility model and the washing quality is greatly enhanced. The device can be used for washing brush **bottle** washing machines and ultrasonic washing machine.

14/14 © EPODOC / EPO

PN - [CN2631654Y](#) Y 20040811

PR - CN2003247687U 20030625

AP - CN2003247687U 20030625

DT - I

PA - DAYILONG PACKING MACHINERY CO [CN]

TI - **Bottle** cleaning apparatus

AB - The utility model discloses a **bottle** washing device. The end of the device is equipped with an extension body with a nozzle, and the extension body can move back and forth in the cylinder. The end part of the cylinder is connected with a water inlet. The water inlet is used to connect with the inlet branch. When the bottles are in

need of washing, the **bottle** is fixed at an appropriate **position**, the water inlet is connected with the inlet branch and the extension system will pressure extend into the cylinder. Meanwhile the nozzle is inserted into the **bottle** and rotates under the pressure. Water starts to **wash** the **bottle** under pressure. When the working process is finished, the extension system out of its own gravity retracts to the cylinder and leaves the **bottle**. Through the automatic combination of nozzle inserting, spraying and nozzle retracting, the device works steadily and accurately, as well as improves the working efficiency.

[SS 8] ..v

[EPODOC: SS 8]