

[SS 14] ..fi epodoc



Database: EPODOC

[EPODOC: SS 14] brew+ and chamber+

Results in EPODOC **3.108**

[SS 15] * and PD<2013-11-20

Results in EPODOC **2.218**

[SS 16] * and valve

Results in EPODOC **347**

[SS 17] * and (wip+ or plow)

Results in EPODOC **0**

[SS 18] 16 and wiping

Results in EPODOC **0**

[SS 19] 16 and plow

Results in EPODOC **0**

[SS 20] 16 and (passageway or hole+)

Results in EPODOC **29**

[SS 21] ..v

[EPODOC: SS 21] ..li 19-29



19/29 © EPODOC / EPO

PN - [JPH09273483](#) A 19971021

PR - JP19960082466 19960404

AP - JP19960082466 19960404

DT - I

CCI - [F04B27/1804](#) ; [F04B49/225](#)

FI - F04B27/08&P; F04B27/08&Q; F04B27/12&P; F04B27/12&Q; F04B49/00&361; F04B49/12; F04B49/22

FT - 3H045/AA04; 3H045/AA12; 3H045/AA27; 3H045/AA33; 3H045/BA43; 3H045/CA02; 3H045/DA25; 3H045/EA33; 3H076/AA06; 3H076/BB50; 3H076/CC41; 3H076/CC85; 3H076/CC92; 3H145/AA04; 3H145/AA12; 3H145/AA27; 3H145/AA33; 3H145/BA43; 3H145/CA02; 3H145/DA25; 3H145/EA33

PA - TOYODA AUTOMATIC LOOM WORKS

TI - VARIABLE DISPLACEMENT TYPE COMPRESSOR

AB - PROBLEM TO BE SOLVED: To suppress increase in a discharge temperature. SOLUTION: An intake **hole** 40 connected to an external cooling circuit is opened in a crank **chamber** 5 formed in a front housing 2, and an intake **chamber** 30 inside a rear housing 3 communicates with the crank **chamber** 5 via an intake passage arranged via a cylinder block 1. A regulation **valve** 45, which regulates a passage cross section area so as to vary an intake **chamber** pressure, is arranged in the inside of the intake passage, and the regulation **valve** 45 is operated by means of a displacement control **valve** controlling the **brewed** pressure inside the intake passage, so that abnormal reduction in an intake **chamber** pressure and increase of a discharge temperature can be suppressed.

20/29 © EPODOC / EPO

PN - [GB2217223](#) A 19891025

PNFP - GB2217223 B 19920603

PR - GB19880008363 19880409

AP - GB19890008008 19890410

DT - *

CT - (A B)
[GB410427](#) A []; [GB987814](#) A [];
[GB1351752](#) A []; [EP0224110](#) A2
[US4251366](#) A []

CCI - [B01D29/085](#)

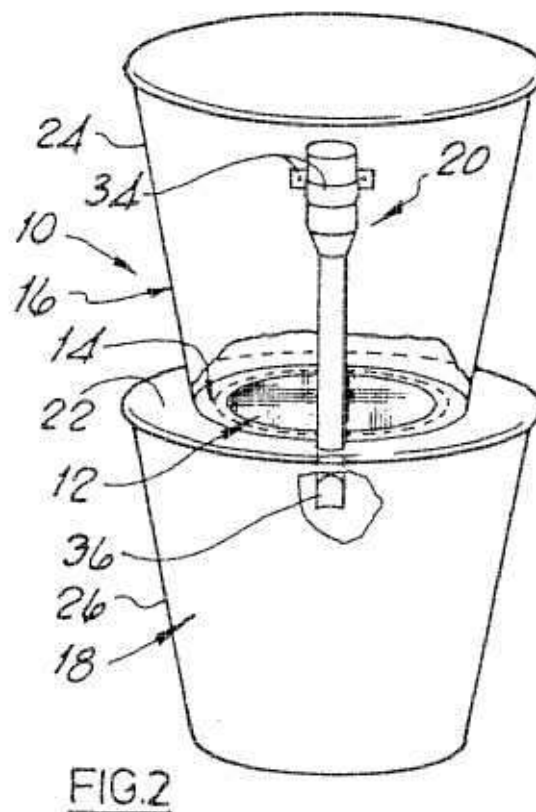
CLC - [B01D29/085](#), [B01D29/60](#), INV

CCA - [B01D29/60](#)

PA - (A B)
 GARN BRIAN WILLIAM

TI - (A)
 Vacuum filter
 (B)
 SCREENING OR FILTERING
 APPARATUS

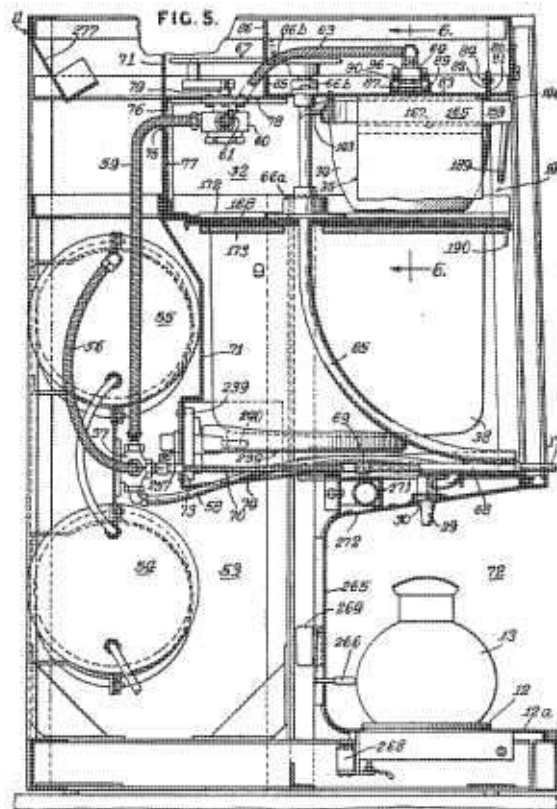
AB - (A)
 Apparatus for batchwise filtering
 of thick liquids such as wall-
 paper paste or **brewing** liquor in
 volumes of the order of 1 to 5



gallons at a time comprises upper and lower **chambers** 24, 26 separated by a screening of filtering medium 12. Vacuum can be applied to the lower **chamber** by a domestic or industrial vacuum cleaner connected thereto via a hose and an associated end fitting 20 extending through a **hole** in the lid of the vacuum **chamber** and detachably securable to a wall of the upper **chamber**. A manually adjustable bleed **valve** permits selective reduction of the vacuum applied, if necessary. <IMAGE>

21/29 © EPODOC / EPO

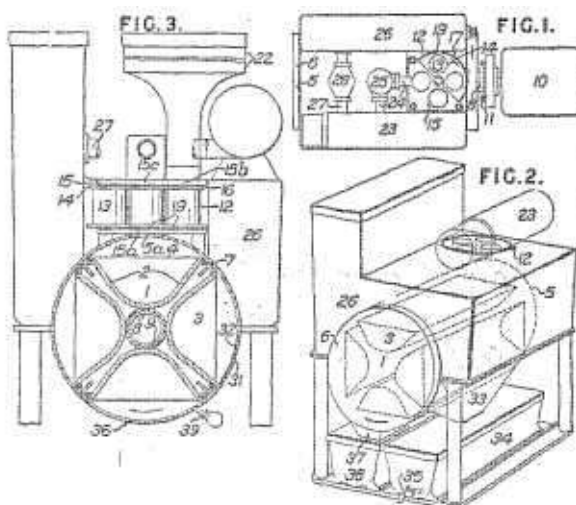
- PN - [GB1072351](#) A 19670614
 PR - US19620248681 19621231
 AP - GB19630038372 19631231
 DT - **
 CCI - [A47J31/007](#)
 PA - CORY CORP
 TI - Beverage **brewing** and dispensing apparatus
 AB - 1,072,351. Coffee making apparatus. CORY CORPORATION. Dec. 31, 1963 [Dec. 31, 1962], No. 38372/63. Heading A4D. In an apparatus for preparing, storing and dispensing coffee into jugs or like containers for further distribution, the beverage preparing and storing means are duplicated so that one may be recharged with coffee grounds, while the grounds in the other are being infused or the coffee is being dispensed. After recharging **brewing chamber** 34 with coffee grounds and replacing it, selector arm 65 is swung by handle 17 about a vertical axis to prepare one means for infusion and to permit



the other means to be recharged. The arm 65 operates pivoted lever 67 to adjust **valve** 60 to supply hot water to **chamber** inlet 64 and to effect sealing between the inlet and the lid of **chamber** 34. A solenoid controlled **valve** (259) is operated, on depressing start button (19), to deliver cold water to thermostatically controlled boilers 54 and 55. Hot water is thereby displaced from the boilers and flows through pipes 56, 59 and 63 to inlet 64 of **chamber** 34. At any time, handle 17 may be twisted about its axis, to adjust **valve** 57 and operate switch 257 (controlling **valve** 259), to divert a flow of hot water to outlet 29. Disabling switches (184, 191) in the circuit of coil (259a) prevent actuation of the **valve** (259), if the **chamber** 34 or coffee storage tank 38 are out of position. Switch (191) is also responsive to actuation by a float (199) in tank 38, which must be in the tank empty position before **valve** (259) can be operated. The hot water supplied through inlet 64 passes through to the bottom of the **chamber** and wells up through to coffee grounds to be discharged at lip 143 after passing through a filter panel in the **chamber** lid. The coffee runs from lip 143 into tank 38. Tank 38 is provided with a thermostatically controlled heater (233) in mounting 234 which is initially energized through a holding circuit for a start-button operated relay, in parallel with the start-button contacts (19a, b). When the tank 38 is full, float operated switch (191) is actuated to break the

holding circuit, de-energize coils (259a and 261) (thus terminating infusion and providing an alternative path of energization of heater 233) and allow a circuit to be completed, through dispensing button contacts (24a, b), which can operate a solenoid (117) controlling a plug **valve** (130) sealing a **hole** (140) in the bottom to tank 38. The **valve** (130) can be closed manually in an emergency and solenoid (117) is further disabled, electrically, by a feeler device 266 detecting the presence of a jug 13 beneath **hole** (140). The weight of a partially filled jug 13, on plate 12, operates a switch 268 to energize a lowwattage heater in the plate. Visual indicators show the levels of coffee in tanks 33 and 34 and signal lamps indicate the preparative step required. Both **brewing chambers** 33 and 34 may be removed when handle 17 is in its central position.

- 22/29 © EPODOC / EPO
- PN - [GB870763](#) A 19610621
- PR - GB19580032612
19581013; FR19610865182
19610616
- AP - GB19580032612 19581013
- DT - *
- CCI - [A47J31/002](#) ; [A47J31/405](#)
- PA - NAVY ARMY AND AIR FORCE INST
- TI - Improvements relating to
automatic **brewing** apparatus
for tea and like beverages
- AB - 870,763. Apparatus for making
tea and like beverages. NAVY,
ARMY & AIR FORCE INSTITUTES.
Jan. 13, 1960 [Oct. 13, 1958], No.
32612/58. Class 129. Apparatus
for making tea or the like

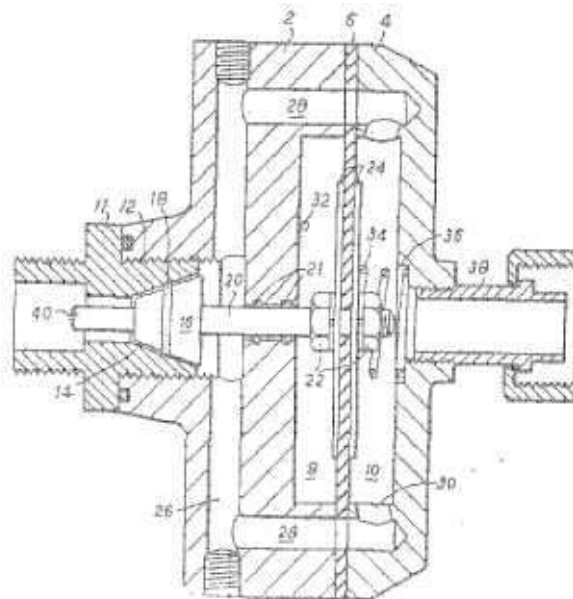


comprises a rotor 1 intermittently rotatable in a stationary cylinder 5 and having a plurality of equal compartments 3 which in one position are fed with tea leaves and hot water and held there for a predetermined infusion period and in another position deposit the infusion in a receptacle 34. As shown, rotor 1 is divided by walls 2, held by packing strips 7 which, with end walls 4 form the compartments 3. The cylinder 5 is closed by covers 6 at least one of which is removable and the rotor 1 is carried on and rotated intermittently by shaft 8 by means of a rubber sleeve 9. Shaft 8 is driven intermittently through 90 degrees at a time by Geneva mechanism 11 from a motor 10. A rotatable dispensing device 12 also driven intermittently deposits dry tea leaves and boiling water in compartment 3. The device 12 comprises four openended cylindrical tea measuring **chambers** 13 carried between plates 14, connected by cylinder 17, and rotatably mounted between fixed plates 15 from which they are separated by seals 16. Circular **holes** 19 in plates 14 communicate with the **chambers** 13. Lower plate 15 has a **hole** 15a communicating with a **hole** 5a in the top of cylinder 5 and the upper plate 15 has **holes** 15b, 15c respectively supporting a hopper 22 containing tea leaves and being connected through a pipe 24 controlled by an electromagnetic **valve** 25 to a boiler 23 e.g. of the instantaneous type. Boiler 23 receives water from storage tank 26 where it is preheated through

a pipe 27 controlled by an electromagnetic **valve** 28. Motor 10 and valves 25, 28 are operated automatically under the control of a timing device when a cycle of operations has been initiated. Opposite the compartment 3 facing right, Fig. 3, is an opening 31 covered by a strainer 32 and communicating through a funnel 33 with a receptacle 34 to receive the **brewed** tea which is drawn off as required through tap 35. Opposite the lefthand side of the downwardly facing compartment 3 is a series of openings 36 leading through funnel 37 to receptacle 38. The compartment is washed out by spray nozzles 39.

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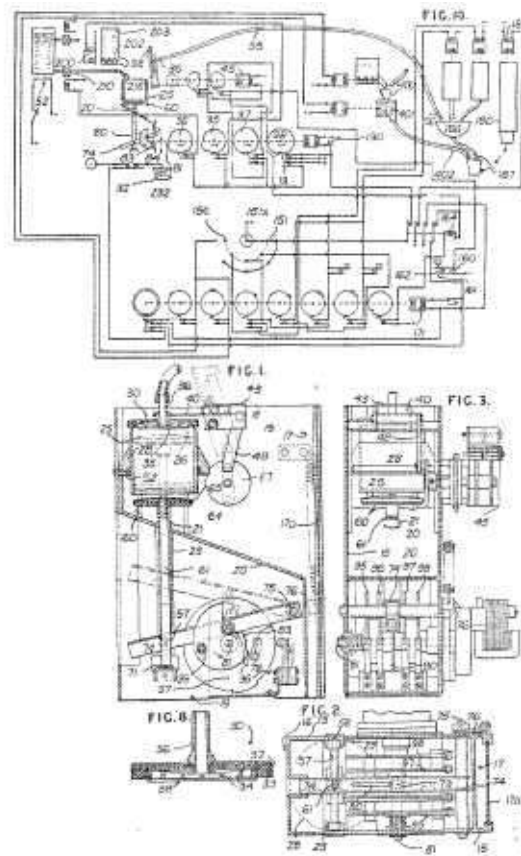
PN - [GB1509711](#) A 19780504
 PR - GB19740029770 19750523
 AP - GB19740029770 19750523
 DT - *
 CCI - [G05D16/0658](#)
 PA - YOUNG & CO S BREWERY LTD
 TI - VALVES
 AB - 1509711 Valves YOUNG & CO's **BREWERY** Ltd 23 May 1975 [4 June 1974] 29770/74 Heading F2V [Also in Division F1] A **valve** closure member 16 is biased, as by spring 34, towards a seating 14 and is attached to a pressure sensitive displaceable member such as diaphragm 6 which has a face in communication with an outlet whereby a reduction of fluid pressure at the outlet displaces the closure from the seating against the bias. As shown the diaphragm 6 separates the **chambers** 8, 10 and the spring 34 acts on the



closure 16 through the stem 20. **Chamber** 10 is connected with a space downstream of the closure by passages 26, 28, 30; **chamber** 8 being open to atmosphere via vent **hole** 32. The **valve** may be used in a beer delivery installation between a barrel and a beer engine so that the beer engine inlet is never subjected to **valve** inlet pressure and a beer engine may thus be used to draw from a source under pressure or overhead. The closure has a sealing ring 18 with a conical outer surface.

24/29 © EPODOC / EPO

PN - [GB910555](#) A 19621114
 PR - US19590863265 19591231
 AP - GB19600024966 19600718
 DT - **
 CCI - [A47J31/405](#) ; [G07F13/065](#)
 PA - SEEBURG CORP
 TI - Beverage making machine
 AB - 910,555. Beverage preparing machines. SEEBURG CORPORATION. July 18, 1960 [Dec. 31, 1959], No. 24966/60. Class 129. [Also in Group XVIII] In a beverage preparing machine, a piston 60 reciprocates into and out of a cylinder 25 with an open head 26 having a cover 30 which is removed for a brief period as the piston enters the cylinder 25, during which the cylinder is charged with beverage ingredients and after which the piston 60 moves further into the cylinder 25 so that at least some of the ingredients are forced through a discharge opening, subsequent retraction of the piston scavenging the cylinder. As shown, the **brewer** unit



comprises a body casting with side walls 15, back wall 16, open front 17 and top and bottom 18 and 19, the front being closable by a splash panel 17D. The cylinder 25 is carried in an annular block 28 secured to wall 16 and containing an electric heating coil 52. The pivoted lid 30 has a gasket 33 which engages the top of cylinder 25 within a gasket cup 32 beneath which there is a filter grille 34 on which is secured a filter cloth 38. Lid 30 is secured to a threaded discharge nipple 36 which projects through a **hole** in the end of a channel-shaped rocker arm 40 to which it is secured. The other end of arm 40 is carried in a bracket 43 pivoted in the body casting and is oscillated through gearing and a crank-rod 48 from an electric motor 45 to open and close the lid 30. Within the body casting is an apron 20 with an aperture 21 to receive the rod 61 of piston 60. Near its lower end rod 61 has a coupling pin 57 which engages a slot in a lever 74 and has end rollers 58 which engage tracks 23 on the side walls of the body casting. The piston has a thin sealing skirt 64, e.g. of tetrafluorethylene, which is pressed outwardly by an annular resilient filler and spreader member 65, e.g. of rubber or the like, and a spider plate 67. At the bottom of its stroke, the lower end of rod 61 strikes shock-absorbing means 71 to dislodge the spent grounds. Lever 74 is pivoted at one end on a cross-pin 75 which projects through one side wall and is adjustably secured to a spring-biased lever 76, the spring being sufficiently

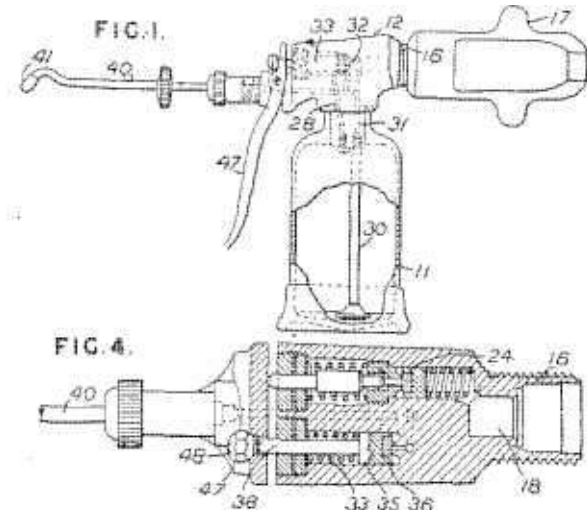
strong to return the piston to the bottom of its stroke rapidly. A shaft 81 of a timer unit carries a piston cam 80 engaged by a cam roller 79 on lever 74 and having a deep notch 82 to allow the piston to drop sharply at the end of each **brew** cycle. Closely following the notch 82 is a shallow rise on to a dwell lobe 83 which raises the piston so that it just enters the cylinder where it is held for loading with a measured charge of ground coffee and hot water. Then during the engagement of roller 79 with the arc 84 of the cam the piston is advanced gradually until there is only just room for the grounds. This is followed by the deep drop when the spent grounds are deposited on apron 20. Adjustable switch cams 95 and 96 float on shaft 81 and are joined to the switch cams 97, 98 by a tie-rod 99. Timing cams 95, 96, 97 and 98 control respectively coffee delivery, hot water delivery, opening of lid 30 and **brew** timer motor 190. A selector knob sets selector contacts 151, 151x which effects delivery of coffee black or with cream or sugar or both or with double portions of cream or sugar or both. When the selector switch is set to black coffee and the start switch 160 is actuated, e.g. by a coin C closing contacts 161, 162 to commence operations a vend timer unit driven by a motor 171 is started and turns eight timer cams. Meanwhile, a cup dispenser 180 is energized by a motor 181 and deposits one paper cup beneath a dispensing nozzle 187 which leads from a mixing basin 188. Energization of relay coil 164

also energizes **brew** timer motor 190 which rotates shaft 81 and hence cam 80 which operates piston 60 through cam roller 79. Piston 60 is raised and dwell 83 holds it just within the cylinder while coffee cam 95 causes the energization of motor 200 which drives a screw 202 to dispense the ground coffee from canister 203 into cylinder 25 and immediately after a hot water **valve** 210 is opened under the control of cam 96 for sufficient time to deliver the required quantity of hot water to the cylinder. Cover motor 45 is then energized to place the lid 30 firmly on top of cylinder 25. The piston 60 then moves upwards forcing the **brew** out through filter 38 into delivery line 55 connected to a nozzle 56 directed into the mixing bowl 188 from which the coffee gravitates into the cup below. If selected, cream and sugar are introduced to the mixing bowl at the same time. Sufficient **brew** is made to leave some in line 55 so that when the piston drops suddenly, this is drawn back through the filter 38 to clear it of grounds. As the piston is nearing the bottom of cylinder 25 the cover 30 starts to open again under the influence of cover cam 97. As the cover approaches its open position a jet of hot water is released through spout 216 which washes down the cylinder walls and the piston and runs down apron 20 into waste receiver 232. The machine is stopped automatically when waste receiver is full. Hot chocolate is selected by setting contact 151 on contact 156 which causes chocolate powder and hot water

to be delivered to a mixing bowl 400. This bowl 400 discharges into an agitator **chamber** 401 leading to a delivery tube 402 which terminates above the cup delivery station.

25/29 © EPODOC / EPO

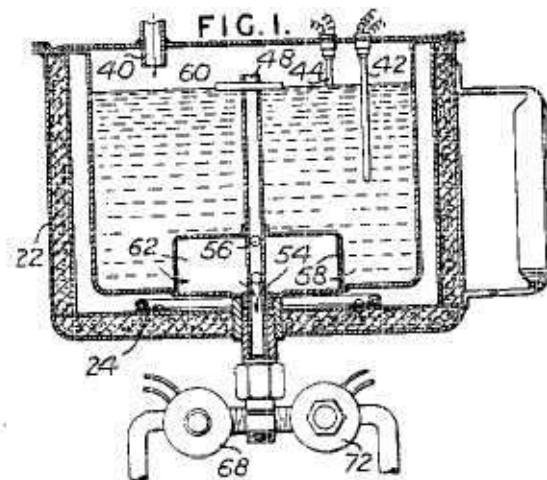
- PN - [GB524474](#) A 19400807
- PR - GB19390003220 19390131
- AP - GB19390003220 19390131
- DT - *
- CCI - [A61M11/02](#)
- PA - SPARKLETS LTD; WILLIAM BREWER
- TI - Improvements in or relating to devices for discharging liquids under pressure
- AB - 524,474. Liquid forcing apparatus. SPARKLETS, Ltd., and **BREWER**, W. Jan. 31, 1939, No. 3220. [Class 102 (ii)] [Also in Group XXIX] In an apparatus for discharging liquids under pressure of the kind in which liquid is discharged by gas under pressure supplied from a capsule, an actuating member 47, Fig. 1, is provided which, on movement in one direction opens a **valve** 24, Fig. 4, to admit gas to the container 11, while movement in the opposite direction opens a **valve** 36 to control a liquid passage, the arrangement being such that both valves cannot be open simultaneously. The apparatus comprises a head 12 screwed at 16 to receive a capsule holder 17 and carrying the usual piercing needle and provided with a gas **chamber** 18 leading to a passage, in which is situated a spring-pressed **valve** 24, communicating by a passage 28 with the vessel 11. A dip tube 30 is connected to a second



passage 31 in the head 12 communicating with a passage 32 leading to a **valve chamber** 33 containing a spring-pressed **valve** 35. A lever 47 hinged to the head bears against the end of a rod operating the **valve** 24 and has a **hole** through which extends a **valve** rod 38 provided with an abutment 48. The discharge tube 40 is rotatably mounted at the head 12.

26/29 © EPODOC / EPO

PN - [GB819448](#) A 19590902
 PR - US19570633798 19570111
 AP - GB19580000428 19580106
 DT - **
 CCI - [B67D3/00](#) ; [B67D3/0003](#) ;
[B67D3/0022](#) ; [B65B3/30](#)
 CCA - [Y10T137/86228](#)
 PA - AUTOMATIC CANTEEN CO
 TI - Dispensing liquids
 AB - 819,448. Emptying tanks ;
 venting apparatus. AUTOMATIC
 CANTEEN CO. OF AMERICA. Jan. 6,
 1958 [Jan. 11, 1957], No. 428/58.
 Class 21. Measured quantities of
 liquid are dispensed from a
 storage **chamber** 60 by a
 solenoid **valve** 72 opened for a
 predetermined interval and, to
 prevent variations owing to
 varying head in the **chamber**,
 discharge takes place from a
 dispensing **chamber** 62 which
 has outlets 54 having an area
 larger, say, by three times, than
 the area of constantly-open
 inlets 58 connecting it to the
 storage **chamber**. The
 dispensing **chamber** 62 may be
 fitted, as shown, in a depression
 in the bottom of the
 storage **chamber**, or the
 storage **chamber** may be divided



into upper and lower segments or the dispensing **chamber** may be fitted outside the storage **chamber**. The dispensing **chamber** has a capacity slightly larger than the quantity to be dispensed. A tube 48 vents the dispensing **chamber** to the top of the storage **chamber** through a **hole** 56 which initially, when the dispensing **chamber** is full, acts as a liquid outlet. An electrode 42 starts a coffee **brewer** or other liquid supply when the level in the **chamber** 60 falls below the level of the electrode and supply through a pipe 40 is controlled by a timer adjusted to supply a given quantity to the storage **chamber** ; a second electrode 44 cuts off the supply through the pipe 40 if the timer fails to function. Heat insulation 22, a heating element 24 and a drain **valve** 68 are provided.

27/29 © EPODOC / EPO
 PN - [EP2077086](#) A1 20090708
 PNFP - EP2077086 B1 20101222
 PR - EP20080382001 20080102
 AP - EP20080382001 20080102
 DT - *; Rep
 CT - || STSE (A1)
[FR2132060](#) A1 19721117
 [X] (RANCILLO SAS OFF)
 [X] 1,14
 * page 4, line 22 - page 6, line 12; figure - *;
[EP0561741](#) A1 19930922
 [X] (COSMEC SRL [IT])
 [X] 1-3
 * page 3, line 29 - page 6, line 45; figure - *;
[EP0465877](#) A1 19920115
 [X] (RANCILIO MACCHINE CAFFE [IT])
 [X] 1

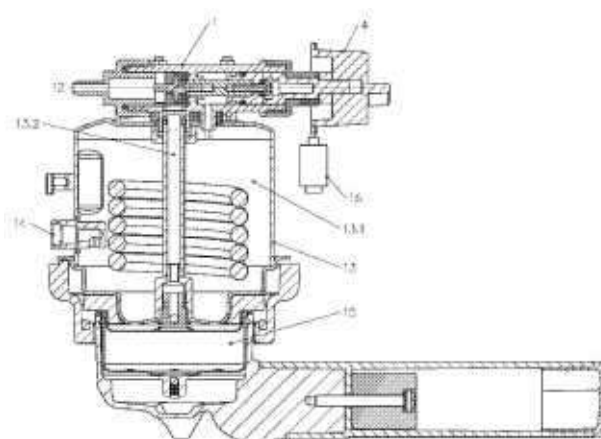


FIG. 2

* column 3, line 13 - column 6,
line 36; figure - *;
[WO02100227](#) A1 20021219
[X] (SARA LEE DE NV [NL], et al)
[X] 1
* page 7, line 24 - page 16,
line 8; figure - *

- CCI - [A47J31/36](#) ; [A47J31/46](#)
- PA - (A1 B1)
CELAYA EMPARANZA GALDOSINT
SA [ES]
- TI - (A1 B1)
Coffee maker with
depressurization **valve**
- AB - (A1)
A coffee maker comprising a
boiler assembly (B), a filter
holder (C) with a **brewing
chamber** (15), a steamer
assembly (D), a depressurizing
waste water reservoir and a
mechanical three-way **valve**
assembly (A), the latter
comprising an inlet (10) from the
boiler assembly (B), a first outlet
(11) to the **brewing chamber** (15)
and a second outlet (12) to the
depressurizing waste water
reservoir. The three-way **valve**
assembly (A) also comprises a
first **chamber** (1.2) into which
the inlet (10) opens, a
second **chamber** (1.3) having the
first and second outlets (11 and
12), a **passageway** (1.1) between
both **chambers** (1.2 and 1.3), and
a piston (6) that extends into the
first and the second **chambers**
(1.2 and 1.3) through
the **passageway** (1.1) between
them, said piston (6) having a
gasket (9) in the second **chamber**
(1.3) that can seal alternatively
the **passageway** (1.1) or the
second outlet (12).

PR - CN20042111237U 20041105
 AP - CN20042111237U 20041105
 DT - I
 PA - WUHAN INST OF MATHEMATICAL SCI [CN]
 TI - Multi-window surface glass air **chamber**
 AB - The utility model discloses a multi-window surface glass air **chamber** which is composed of flanges, a stainless steel-quartz transition pipe (**valve**) and quartz glass sheets. The utility model is characterized in that the stainless steel-quartz transition pipe is connected with the rectangular quartz glass sheet provided with a circular **hole**; the rectangular quartz glass sheet provided with the circular **hole** is respectively connected with the rectangular quartz glass sheet and the positive-octagon quartz glass sheet; the rectangular quartz glass sheet provided with the circular **hole** is respectively connected with glass circular pipes accompanied with **Brewster** windows; the rectangular quartz glass sheet provided with the circular **hole**, the rectangular quartz glass sheet and the positive-octagon quartz glass sheet are jointly connected to form a glass container of an eight-prism shape. The utility model has the advantages of good versatility, simple structure, multiple functions and commercialization.

29/29 © EPODOC / EPO

PN - [CA2028297](#) A1 19920424
 PNFP - CA2028297 C 20000606
 PR - CA19902028297 19901023
 AP - CA19902028297 19901023
 DT - I
 PA - (A1)
 GARN BRIAN W [GB]
 - (C)
 GARN BRIAN WILLIAM [GB]
 TI - (A1 C)
 VACUUM FILTER
 AB - (C)
 Apparatus for batchwise screening or filtering of thick liquids such as wall-paper paste or **brewing** liquor in volumes of the order of 1 to 5 gallons at a time comprises upper and lower **chambers** separated by a screening or filtering medium. Vacuum can be applied to the lower **chamber** by a domestic or industrial vacuum cleaner connected thereto via a hose and an associated end fitting extending through a **hole** in the lid of the vacuum **chamber** and detachably securable to a wall of the upper **chamber**. A manually adjustable bleed **valve** permits selective reduction of the vacuum applied, if necessary. A connector enables quick attach/detach connection and disconnection of the **chambers** and utilises low cost plastic buckets for the purpose.