



New connection on: : 08-09-2018 : 06:43:38 - Last disconnection on: :
08-09-2018 : 04:53:55

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

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 Database: EPODOC

[EPODOC: SS 1] pump 3d dispens+

Results in EPODOC **8.249**

[SS 2] nozzle and spray

Results in EPODOC **84.829**

[SS 3] 1 and 2

Results in EPODOC **144**

[SS 4] stem

Results in EPODOC **207.628**

[SS 5] 3 and 4

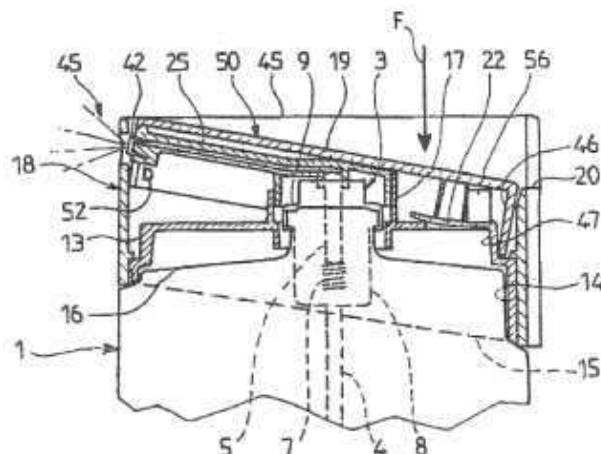
Results in EPODOC **9**

[SS 6] ..v

[EPODOC: SS 6] ..li



- PN - [US2005098584](#) A1 20050512
- PR - FR20020002816 20020306
- AP - US20040937407 20040910
- DT - **
- CT - || R141 (A1)
[US4506805](#) A [];
[US5622286](#) A [];
[US6543653](#) B2 [];
[US2003089734](#) A1 [];
[US6089410](#) A [];
[US5242090](#) A [];
[US2002134798](#) A1 [];
[US5154323](#) A [];
[US5156304](#) A [];
[US5358179](#) A []
- CCI - [B05B11/3057](#) ; [B65D83/206](#)
- TI - Dispensing device with pivoting **spray nozzle**
- AB - **Pump** device for **dispensing** a liquid or pasty product packaged in a container (1), said device comprising a pump (3) equipped with a hollow piston **stem** (5), a rigid actuating lever (50) mounted so as to pivot with respect to said container to actuate said **pump**, a **dispensing nozzle** (26) fastened to said actuating lever so as to pivot with the latter, an endpiece (24) coupled to said outer end of the hollow **stem**, and a connecting duct (25) linking said endpiece to said dispensing **nozzle**, characterized in that said actuating lever (50) is able to cooperate by sliding contact with said endpiece to cause said hollow **stem** to slide in said actuating direction when said actuating lever pivots, said connecting duct (25) being able to deform elastically when the hollow **stem** thus slides.



PN - [US5887313](#) A 19990330

PR - US19970879160
19970619; US19960588438
19960118; US19960023087P
19960725

AP - US19970879160 19970619

DT - *; Rep

CT - || STSE (A)
[US3060484](#) A 19621030 [
] (KRAMMES DON C);
[US3101505](#) A 19630827 [
] (BELICKA MICHAEL E, et al);
[US3224023](#) A 19651221 [
] (BRODIE KENNETH G);
[US3939527](#) A 19760224 [
] (JONES TERRY H);
[US3959844](#) A 19760601 [
] (CYPHERT GILBERT G);
[US3964925](#) A 19760622 [
] (BURGOON JACK L);
[US4200951](#) A 19800506 [
] (BURGOON JACK L [US], et
al);
[US4298038](#) A 19811103 [
] (JENNINGS J THOMAS);
[US4314385](#) A 19820209 [
] (WIMSATT JAMES M, et al);
[US4321219](#) A 19820323 [
] (BARKER RICHARD M);
[US4558484](#) A 19851217 [
] (GROTH HUGH F [US]);
[US4559665](#) A 19851224 [
] (FITZWATER EDWIN [US]);
[US4864680](#) A 19890912 [
] (BLASE MICHAEL R [US], et
al);
[US4938421](#) A 19900703 [
] (BERFIELD ROBERT C [US], et
al);
[US4956891](#) A 19900918 [
] (WULFF RICHARD F [US]);
[US5184370](#) A 19930209 [
] (JUNG TAIK K [KR]);
[US5287590](#) A 19940222 [
] (YONKERS ROBERT A [US], et
al);
[US5311638](#) A 19940517 [
] (FURCRON KENT J [US], et al);
[US5349984](#) A 19940927 [
] (WEINHEIMER JACEK M [US],
et al);
[US5398567](#) A 19950321 [
]



] (SPECHT GLENN E [US]);
[US5406673](#) A 19950418 [
] (BRADD SIDNEY H [US], et al);
[US5433242](#) A 19950718 [
] (BUCHTEL DEAN H [US], et al);
[US5493752](#) A 19960227 [
] (CROUSER DARWIN S [US], et
 al);
[US5500977](#) A 19960326 [
] (MCALLISE GREGG A [US], et
 al);
[GB2285590](#) A 19950719 [
] (MUELLER DAVID G, et al)

CCI - [A47L11/30](#) ; [A47L11/34](#) ;
[A47L11/4083](#)

CCA - [Y10T29/49904](#)

PA - WHITE CONSOLIDATED IND
 INC [US]

TI - Reservoir assembly for wet
 extractor system

AB - An upright wet extractor
 includes a base assembly, a
 manipulative handle
 pivotally attached to the base
 assembly, and a motor driven
 agitator brush. A cleaning
 solution dispensing tank is
 removably attached to the
 handle assembly by a
 pivotable latch member. In a
 floor cleaning mode, cleaning
 solution is selectively
 supplied by gravity from an
 outlet of the dispensing tank
 to a floor cleaning **spray
 nozzle** through a supply tube
 which is controlled by a
 pinch valve. In an attachment
 hose cleaning mode, cleaning
 solution is selectively
 supplied by a motor
 driven **pump** from
 the **dispensing** tank to an
 attachment hose **spray nozzle**
 which is controlled by a
 trigger valve. A valve is
 provided in the outlet of said
 dispensing tank. The valve
 has a **stem** moveable
 between a closed position
 sealing the outlet and an
 open position providing fluid

communication between the dispensing tank and the **nozzle**. A pin is mounted on the handle assembly and is adapted to open and close the valve by engaging the valve **stem** to move the **stem** to an open position when the dispensing tank is mounted on the handle assembly. A boot seal is preassembled with the pin and is mounted as a unit with the pin on the handle assembly to prevent leakage.

3/9 © EPODOC / EPO

PN - [US4434915](#) A 19840306

PR - US19810334340 19811224

AP - US19810334340 19811224

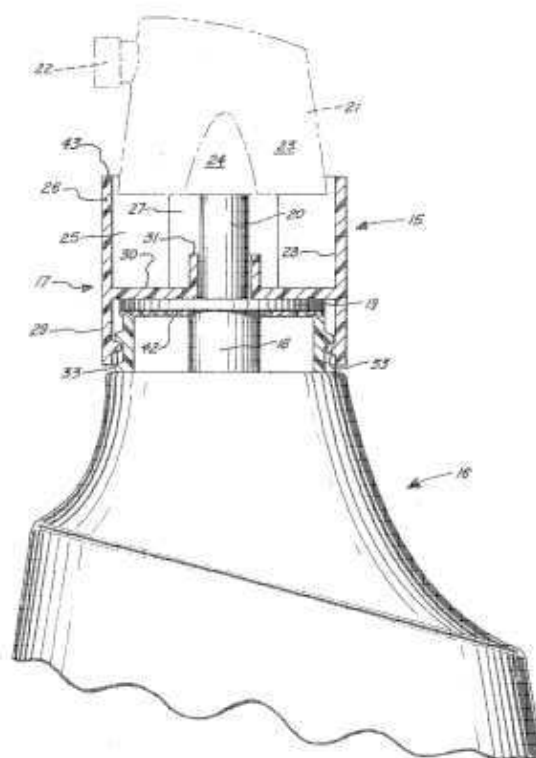
DT - *

CCI - [B05B11/3047](#)

PA - ETHYL PROD [US]

TI - Child-resistant finger **pump dispenser**

AB - A child resistant finger **pump dispenser** having a vertically oriented body member or tank. The tank has a piston therein with an attached hollow outlet **stem** extending out of its upper end. An actuator button is attached to the upper end of the **stem** and has a laterally directed **spray nozzle** extending from the side of the skirt portion of the actuator. A housing has an upper portion that partially surrounds the actuator button and a lower portion that supports the tank and includes a depending skirt having a multiplicity of short threads with projections adjacent their ends on the inner wall of the downwardly depending skirt. The container neck is provided on its outside surface with a multiplicity of interrupted



threads, some having recessed portions on their underside adjacent their terminal ends to receive the projections on the threads on the closure member skirt portion. The upper portion of the housing has opposed flat portions on its inner sidewall which cooperates with opposed flat surfaces on the actuator to prevent rotation of the **spray nozzle**. The short threads on the lower skirt portion are so positioned that when the housing is attached to an oval or non-cylindrical container having the interrupted threads with the projections on their ends that the short threads of the closure will engage the undercuts on the long threads of the container so that the **spray nozzle** of the pump is parallel to the major transverse axis of the container to provide fixed orientation of the pump with respect to the container.

4/9 © EPODOC / EPO

PN - [GB1187099](#) A 19700408
 PR - FR19660079737 19661012
 AP - GB19670045176 19671004
 DT - **
 CCI - [B05B11/3074](#) ;
 [B05B11/3039](#) ; [F04B7/04](#) ;
 [F04B53/162](#)
 CCA - [B05B11/3001](#) ; [B05B11/3066](#)
 PA - VAPORISATEURS MARCEL
 FRANCK S [FR]
 TI - Piston **Pump** for **Dispensing**
 Liquids or Fluid Pastes.
 AB - 1,187,099. Hydraulic
 reciprocating pumps.
 VAPORISATEURS MARCEL
 FRANCK S.A. Oct.4, 1967 [Oct.
 12, 1966], No.45176/67.
 Heading F1A. A leak-proof
 pump for spraying liquids or

FIG. 1

dispensing pastes comprises a pumping chamber 7 mounted in the neck 1 of a container, and a bucket piston 5 connected by a discharge **stem** 17 to an actuating button 10, e.g. having a **spray nozzle** 2, a cylindrical portion 6 of the pumping chamber acting to close the discharge groove 21 and port 3 in the piston 5 during an initial part of the discharge stroke, so that, when groove 21 and port 3 are opened, the pressure in the pumping chamber has built up sufficiently to ensure a satisfactory **spray** without dribbling. Expansion of the pumping chamber volume to permit the initial part of the discharge stroke is provided for by an elastic wall portion 7, as shown, or by forming a flexible part of the pumping chamber as a partly flattened cylinder or sphere which expands to form a true cylinder or sphere on increase in pressure, or by forming the lower part of the pumping chamber with lateral or longitudinal folds, Figs. 7, 8, 12 and 13 (not shown). In Fig.9 (not shown), a dip tube of flexible material has the inlet valve at its inlet end, and is formed with partly flattened walls which expand during the initial part of the discharge stroke. In Fig. 4 (not shown), the pumping chamber has a uniform cylindrical bore, the distension of the pumping chamber wall, during the initial part of the discharge stroke, acting to uncover the discharge groove and port. In Fig. 5 (not shown), spaced longitudinal grooves in the pumping chamber wall act to

uncover the discharge groove and port at spaced intervals during the discharge stroke, to provide discharge of predetermined duration at predetermined intervals. In this embodiment, a vent port communicating with the container interior is closed, when the piston is in its uppermost position, by a conical portion of the discharge **stem** engaging a complementary bore in the container closure carrying the pump, the vent port being open during the discharge stroke. A return spring 11 may be provided around the discharge **stem**, as shown, or may act between the bottom of the piston and the inlet end of the cylinder, thereby biasing the cylinder walls against the piston to improve sealing. In the embodiment shown, container vent port 16 is uncovered by the piston during the discharge stroke. The pumping chamber may be formed integrally with the container closure, as shown, or may be separate, Figs.3 to 5 (not shown). The closure may be screwed or crimped on to the container. The piston and **stem** may be an integral moulding, as shown, or may be made of metal with separate sealing elements Fig. 6 (not shown). Liquid in the **nozzle** is returned to the pumping chamber during the initial part of the suction stroke to prevent drip.

PN - [GB1112531](#) A 19680508

PR - GB19640038964 19640924

AP - GB19640038964 19640924

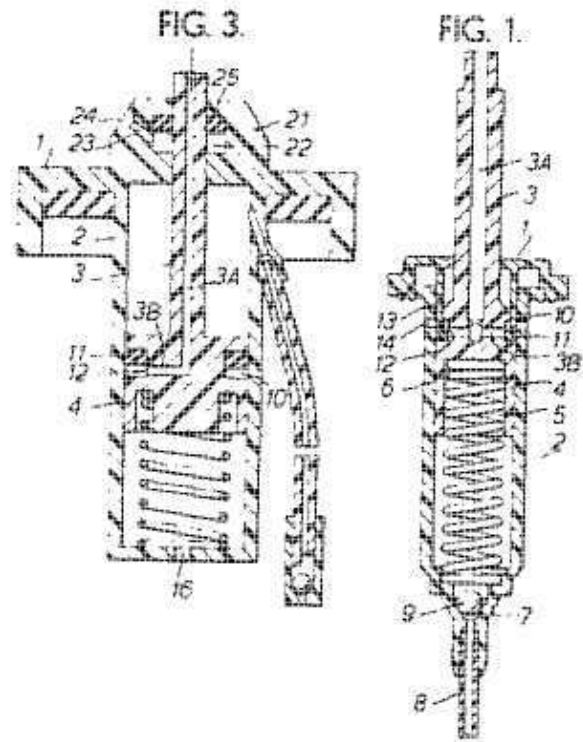
DT - *

CCI - [B05B11/3094](#) ;
[B05B11/3023](#) ; [B05B11/309](#) ;
[F04B9/06](#)

PA - BESPAC INDUSTRIES LTD

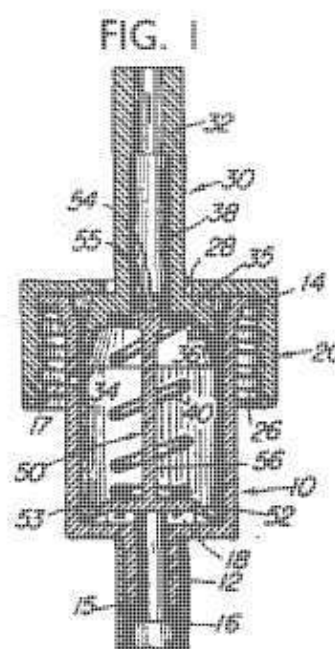
TI - Improvements in and relating
to **dispensing pump** and valve
assemblies

AB - 1,112,531. Reciprocating
pumps; pressurized
dispensing containers.
BESPAC INDUSTRIES Ltd. Sept.
22, 1965 [Sept. 24, 1964; Nov.
6, 1964], Nos. 38964/64 and
45441/64. Headings F1A and
F1R. A **dispenser pump** unit
for mounting on a container
and preventing leakage of the
container contents when not
in use, comprises a
manually actuated plunger 4
with a longitudinal bore 3A
communicating with the
atmosphere and on annular
groove 10 communicating
with bore 3A via radial bores
3B, a sealing ring 11 located
in groove 10 acting to close
bores 3B during the upward
stroke by a spring 6, so that
liquid is drawn into chamber
2 via a check valve 9, and to
open bores 3B during the
downward stroke, so that the
liquid in chamber 2 is
delivered through bores 3B
and 3A. Also on the upward
stroke, air enters the
container via clearance
between **stem** 3 and cap 1
and ports 14, the air passage
being closed in the position
shown by ring 11 seating
against sleeve 13. In Fig. 2
(not shown), the spring
effects the delivery stroke, the
inlet opening being above the
plunger, and entry of air into
the container is controlled by



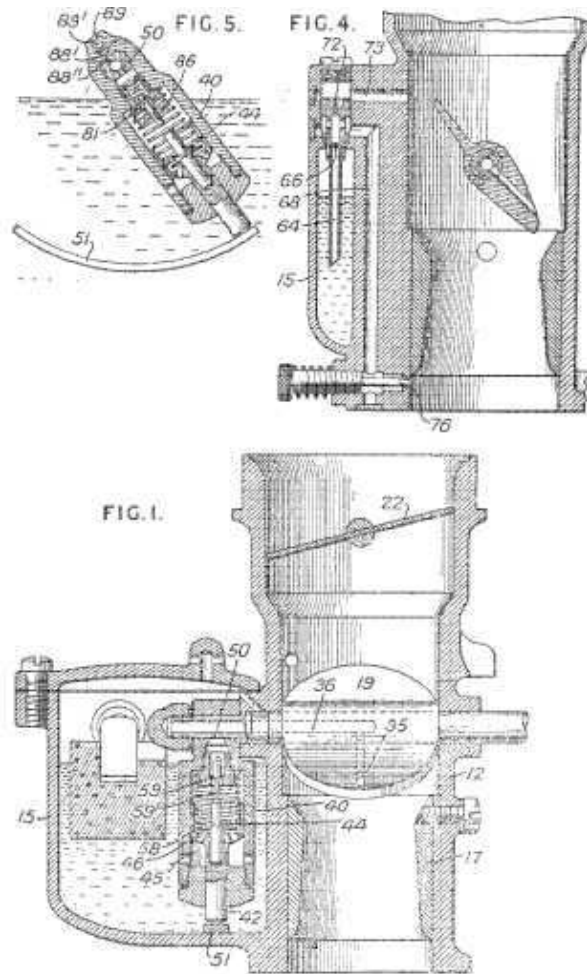
a resilient disc (19). In Fig. 3, sealing ring 11 only controls the entry of air into the container via bores 3A, 3B and port 16, the pump inlet communicating with chamber 2 above the plunger 4, and delivery taking place through a **spray nozzle** 23. A sealing member 25 moves with plunger rod 3 to seal **nozzle** 23 during the downward suction stroke. The pump assemblies may be used for "mother and daughter" pressurized **dispensing** container arrangements, the **pump** assembly being mounted on the "mother" container without the return spring 6 and container venting arrangements. The "daughter" container can then be recharged from the "mother" container by a pumping action.

- 6/9 © EPODOC / EPO
- PN - [GB1426663](#) A 19760303
- PR - AU19730057357 19730626
- AP - GB19740027726 19740621
- DT - **
- CCI - [B05B11/3064](#) ;
[B05B11/3001](#) ;
[B05B11/3069](#) ; [B05B11/3097](#)
- PA - PRECISION VALVE CORP
- TI - PUMP WITH UNITARY VALVE MEMBER
- AB - 1426663 Reciprocating pumps PRECISION VALVE CORP 21 June 1974 [26 June 1973] 27726/74 Heading F1A
A hand-actuated **dispensing pump** for mounting on a container for household products comprises a cylinder 10, a piston 35 with a resilient skirt 34, and a valve-member 50 integrally formed with a resilient-skirted inlet valve 52



sealingly engaging the cylinder bottom and a resilient-skirted outlet valve 54 sealingly engaging the wall of an outlet passage 38 formed through the piston 35 and its integral actuating **stem** 30, an actuating button, e.g. with a **spray nozzle**, being mounted on the **stem**. A central portion of the inlet valve is supported by projections 18 on the bottom of the cylinder, a return spring 40, e.g. of stainless steel, acting between the inlet valve and the piston. The pump is mounted on the container by a threaded cap 20, the container being vented via port 17 when uncovered by the piston during the discharge stroke, the piston engaging the cap in its rest position to prevent leakage. In Fig. 4 (not shown), the cylinder is integrally formed with a mounting cap which may be threaded, snap-fitted, frictionfitted or solvent or heat-welded to the container, and the actuating button extends into the cylinder and has a flange engaging beneath a flange at the top of the cylinder for limiting upward movement and discouraging button removal.

PN - [GB434292](#) A 19350829
PR - GB19340015759 19340526
AP - GB19340015759 19340526
DT - *
CCI - [F02M7/08](#) ; [F02M19/00](#)
PA - MARVELCARBURETERCO
TI - Improvements in or relating to carbureters
AB - 434,292. **Spray** carburetters. STEVENS, A. H., 5, Quality Court, Chancery Lane, London. -(Marvel Carburetter Co. ; 1910, St. John's Street, Flint, Michigan, U.S.A.) May 26, 1934, No. 15759. [Class 7 (iii)] Consists in a downdraught carburetter having a butterfly throttle valve with the fuel **nozzle** located in the air inlet side of the wing which moves downwardly on opening. The carburetter comprises a casing 12, a choke tube 17, an air choke 22 and a throttle 19, in the downwardly movable wing of which is formed the **nozzle** 35 which communicates with the fuel in the float chamber 15 through a duct 36 in the throttle spindle, a calibrated port 50, valve 59, and ducts 46, 45 in a member 40 which is secured to the throttle spindle to swing therewith. The member 40 forms a cylinder for a spring-loaded piston 44 of an accelerating pump, the piston being actuated, as the throttle is opened, by a cam member 51 forcing upwardly a **stem** 42 on the piston. During upward movement of the piston, a disc valve 58 closes ports 46, and a reduced part 59<1> of valve 59 serves to allow of the passage of an increased quantity of fuel. Instead of a two-diameter type of valve, a tapered form may be



employed. For idling purposes, fuel is supplied to a controlled outlet 76, Fig. 4, from a well 15 through tube 64, orifice 66, and duct 68, and air is admitted through a duct 73 and orifice 72. In a modification, Fig. 5, the port 50 is retained and the fuel supply thereto is metered by an orifice 81 until the throttle is opened to such an extent that the cam 51 opens a seated valve 86. Air is admitted to the fuel stream through apertures 89, 88<1>, 88<11>, and a ball valve 89<1> prevents escape of fuel when the accelerating pump is in action. In a further modification, Fig. 6 (not shown), the accelerating **pump** is **dispensed** with and the fuel is controlled by a valve in the lower end of the swinging member by the cam 51, air being again admitted to the fuel. In a still further modification, Fig. 8 (not shown), the swinging member comprises two pipe branches, the free ends having calibrated inlets. One inlet is always submerged, the other being submerged as the throttle is opened. In a modification of the idling device, fuel is discharged through apertures in the throttle and its shaft, Fig. 7 (not shown).

8/9 © EPODOC / EPO
 PN - [GB1109829](#) A 19680418
 PR - US19660565543
 19660715; US19660578270
 19660909
 AP - GB19670014811 19670331
 DT - **
 CCI - [B65D83/205](#) ; [B65D83/228](#)
 CCA - [B05B11/30](#) ; [B05B11/3059](#)

FIG. 3.



PA - AEROSOL INVS & DEV S A I D

TI - Tamper-proof actuator for hand-held dispensers

AB - 1,109,829. Reciprocating pumps. AEROSOL INVENTIONS & DEVELOPMENTS S.A. (A.I.D.) March 31, 1967 [July 15, 1966; Sept. 9, 1966], No. 14811/67. Heading F1A. A temper-proof actuator assembly for a **dispensing pump** mounted in a container comprises a reciprocable button 42 with a **spray nozzle** 52 and a hollow boss 48 receiving the actuating **stem** 26 of the **dispensing pump** piston 24, the button 42 being integrally moulded of plastics with a body portion 44 to which it is connected by frangible webs 54, which break on initial actuation of button 42. On initial mounting of the actuator on container 14, **stem** 26 only partly enters boss 48, initial actuation of button 42 causing **stem** 26 to fully enter the tapered bore of the boss 48, the lower position of the button and the broken webs indicating that the button has been actuated. The base portion 46 of body 44 frictionally engages the pump mounting cap 10. In the embodiments of Figs. 6 to 8 (not shown), the body portion 44 extends upwardly with finger and **nozzle** cutaways to prevent accidental depression of the button 42. Pump outlet valve 32 is actuated by a **stem** 30.

9/9 © EPODOC / EPO

PN - [DE2264989](#) A1 19751030

PR - DE19722264989 19721208

AP - DE19722264989 19721208

DT - *; Rep

- CCI - [B05B11/06](#) ; [F04B33/00](#) ; [F04B39/0005](#)
- PA - CIBA GEIGY AG
- TI - Liquid sprayer with precise **dispensation** control - has piston **pump** on lower side to compress air as propellant
- AB - Between the liquid container and the piston pump is a **spray nozzle** mounted in a holder, with passages for the compressed air and liquid. The passages have valves which are opened at, or before, the end of the compression stroke of the piston. Stops mounted on the piston pump acts on the valve for compressed air during the compression stroke. The liquid valve which is spring-biased in the closed position includes a **stem** which is sealed from the liquid passage and open relative to a passage connected to the compressed air passage before it opens into the **spray nozzle**, and which is actuated by opening of the compressed air valve to open the liquid valve.