

Search history

Search (Results)

1:

Search SFT=(valve and cam* and driv* and seal*) and PD<20141104 and IC=(F16K) (Results 6544)

2:

Search SFT=(valve and cam* and driv* and seal*) and PD<20141104 and IC=(F16K) (Results 6544)

3:

Search SFT=(valve and (cam* or camming) and driv* and seal*) and PD<20141104 and IC=(F16K) (Results 6544)

4:

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7:

Search AB=(valve and (cam or camming)) and SFT=(driv* and seal* and (face or surface)) and PD<20141104 and IC=(F16K317524 or F16K1/34 or F16K27/02) (Results 21)

Title: CHECK VALVE FOR INJECTING GAS

Abstract: A check valve for injecting gas comprises: an integrally formed body provided with a corrugated portion having a diameter smaller than other areas on an outer surface of an upper portion of a gas flow hole; an integrally formed spindle perpendicularly penetrating the body and provided with a corrugated portion having a diameter smaller than other areas on an outer surface of a lower portion of the gas flow hole of the body; a spring penetrating an upper end portion of the spindle; a spring seat for fixing the spring penetrating the upper end portion of the spindle and for guiding the spindle to a perpendicular position; a coupling ring coupled to an upper end of the body for fixing the body to a prechamber; and a spacer coupled to a lower end of the body for fixing the lower end of the body that covers an outer edge of the spindle to the prechamber.

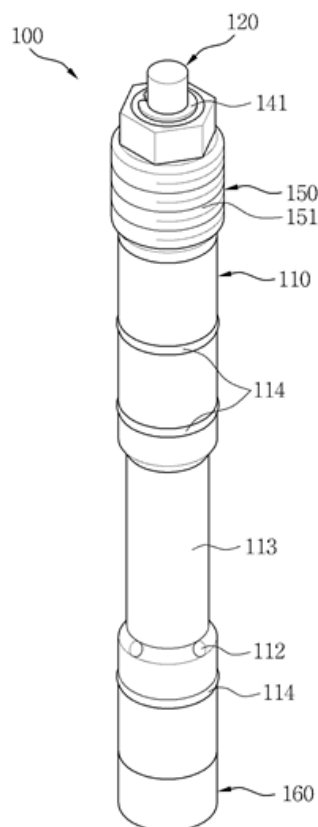
Classifications:

International (IPC 8-9): F01L3/00 F01L3/08 F02B19/10 F02B19/12 F02M21/02 F02M61/04 F02M61/08 F02M61/10 F02M61/16 F02M61/20 F16K27/02 F16K3/24 F16K31/44 F16K31/48 (Advanced/Invention); F01L3/08 F16K27/02 (Advanced/Non-invention)

CPC: F16K3/24 F16K31/44 F02M61/20 F16K31/485 F01L3/08 F16K27/0209 F02B19/108 F02B19/12 F02M21/0242 F02M21/0251 F02M21/0269 F02M21/0275 Y02T10/125 Y02T10/32 F16K15/02 F16K31/52408

US: 251/279 251/322

PatBase - US2015001430_AA



Family:

Publication number	Publication date	Application number	Application date
CN104081033 A	20141001	CN201280068211	20121220
CN104081033 B	20170517	CN201280068211	20121220
CN104105870 A	20141015	CN201280068986	20121221
CN104105870 B	20170301	CN201280068986	20121221
DE602012041471 D1	20180201	DE201260041471T	20121220
DE602012047298 D1	20180628	DE201260047298T	20121221
EP2816216 A1	20141224	EP20120868345	20121220
EP2816216 A4	20150930	EP20120868345	20121220
EP2816216 B1	20171227	EP20120868345	20121220
EP2816217 A1	20141224	EP20120868583	20121221
EP2816217 A4	20160113	EP20120868583	20121221
EP2816217 B1	20180606	EP20120868583	20121221
JP2015505346 T2	20150219	JP20140551181T	20121220
JP2015508854 T2	20150323	JP20140554656T	20121221
JP5889440 B2	20160322	JP20140554656T	20121221
JP6084235 B2	20170222	JP20140551181T	20121220
KR101295262 B1	20130809	KR20120014407	20120213
KR101295263 B1	20130809	KR20120014408	20120213
US2015001430 AA	20150101	US20120374970	20121221
US2015014565 AA	20150115	US20120374968	20121220
US9482362 BB	20161101	US20120374970	20121221
US9599251 BB	20170321	US20120374968	20121220
WO13122317 A1	20130822	WO2012KR11142	20121220
WO13122318 A1	20130822	WO2012KR11265	20121221

Priority:

KR20120014408 20120213
WO2012KR11142 20121220

KR20120014407 20120213
EP20120868583 20121221

EP20120868345 20121220
WO2012KR11265 20121221

Probable Assignee: HYUNDAI HEAVY IND CO LTD

Assignee(s): (std): HYUN DAI HEAVY IND CO LTD ; HYUNDAI HEAVY INDUSSTRIES CO LTD

Assignee(s): HYUNDAI HEAVY IND CO ; HYUNDAI HEAVY IND CO LTD ; HYUNDAI HEAVY INDUSSTRIES CO ;
HYUNDAI HEAVY INDUSTRIES CO LTD

Inventor(s): (std): HEO KWANG CHEOL ; JUNG DAE YEOUL ; KIM JONG SUK ; LEE DAE JIN ; KIM SUNG HYEOK

Agent(s): GULDE AND PARTNER PATENT U RECHTSANWALTSKANZLEI MBB; LORENZ SOENKE; GULDE AND
PARTNER; CANTOR COLBURN LLP; CHOI YOUNG BOK

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

Title: REDUNDANT METAL-TO-METAL **SEALS** FOR USE WITH INTERNAL **VALVES**

Abstract: Redundant metal-to-metal **seals** for use with internal **valves** are described. A plug having redundant **sealing** functionality for use with a poppet of an internal **valve** includes a tapered **surface** to **sealingly** engage a seat of the poppet. Additionally, the plug includes a **seal** adjacent the tapered **surface** and disposed in a groove defined by the plug to **sealingly** engage the seat.

Classifications:

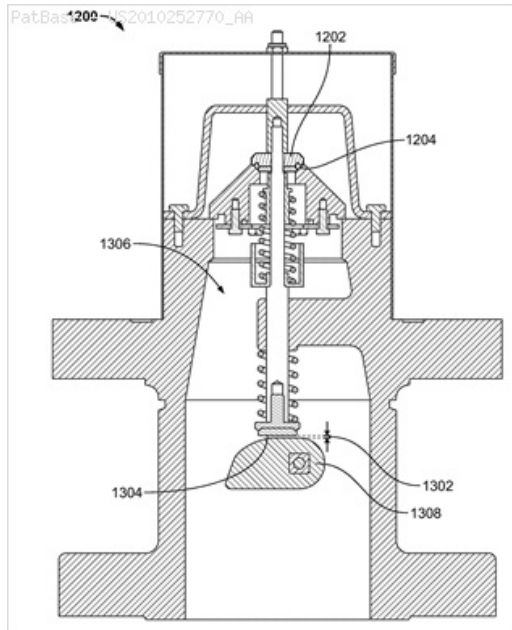
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International (IPC 1-7): F16K1/38 F16K25/00 F16K39/00

CPC: Y10T137/6167 Y10T137/7868 Y10T137/86944 Y10T137/87394 F16K1/385 F16K25/00 F16K39/024 F16K31/52408

European: F16K1/38B F16K25/00 F16K39/02C

US: 123/188.3 123/188.300S 137/329.02 137/516.29 137/599.18 137/630 251/251 251/251S 251/253 251/259 251/332 251/333 251/333P 251/334 251/334S



Family:

Publication number	Publication date	Application number	Application date
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CA2756605 C	20151229	CA20102756605	20100329
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RU2011141332 A	20130510	RU20110141332	20100329
RU2531075 C2	20141020	RU20110141332	20100329
US2010252770 AA	20101007	US20090617143	20091112
US8517046 BB	20130827	US20090617143	20091112
WO10114802 A1	20101007	WO2010US29097	20100329

Priority:

US20090166521P 20090403 US20090617143 20091112 WO2010US29097 20100329

Probable Assignee: EMERSON PROCESS MANAGEMENT REGULATOR TECHNOLOGIES INC

Assignee(s): (std): EHMERSON PROTSESS MENEDZHMENT REG JULEHJTOR TEKNOLODZHIZ INK ; EMERSON PROCESS MAN REGULATOR ; EMERSON PROCESS MAN REGULATOR TECHNOLOGIES INC ; LIN CHUN ; PELFREY ROY RONALD ; MILLER ERIC ALAN

Assignee(s): EMERSON PROCESS MANAGEMENT REGULATOR TECHNOLOGIESINC ; EMERSON PROCESS MANAGEMENT REGULATOR TECHNOLOGIES INC ; EMERSON PROCESS MANAGEMENT REGULATOR TECHNOLOGIES

Inventor(s): (std): LIN CHUN ; MILLER EHRIC ALEN ; MILLER ERIC ALAN ; PELFREY ROY RONALD ; PELFRI ROJ RONAL D ; RONALD PELFREY ROY ; ALAN MILLER ERIC ; CHUN LIN

Inventor(s): ERIC ALAN MILLER ; ROY RONALD PELFREY

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; ROBIC; BOHNENBERGER JOHANNES; SULEIMAN I AL AMMAR LAW OFFICE; HANLEY FLIGHT AND ZIMMERMAN LLC; READ DAVID C

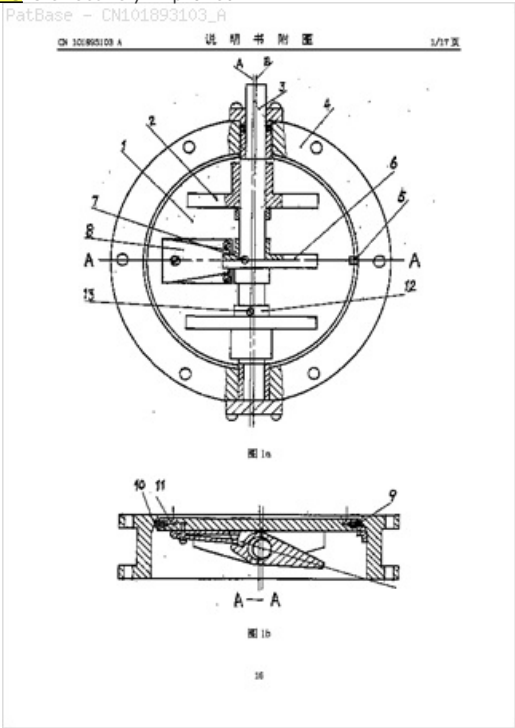
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Title: ELASTIC LIMIT ECCENTRIC SHAFT BUTTERFLY VALVE

Abstract: The invention relates to a butterfly valve, in particular to an elastic limit eccentric shaft butterfly valve which comprises a valve body, a round valve plate, an eccentric shaft and a plate spring, wherein a cylindrical cavity is arranged in the valve body; a valve seat with a conical sealing surface is arranged on the inside wall of one end of the valve body; backstops are arranged on the inside of the valve seat and the inner wall of the valve body; the eccentric shaft penetrates through the cylindrical cavity in the valve body; the valve plate is arranged in the valve body; a shaft seat is arranged at one side of the valve plate; the shaft seat and the eccentric shaft are rotatably connected; a rigid driving arm for driving the valve plate is fixedly connected with the eccentric shaft; one end of the plate spring is fixedly connected onto the valve plate, the eccentric shaft or the driving arm; and the other end is abutted or fixedly connected with the driving arm or the valve plate. By a similar cam effect when the eccentric shaft is at a small rotation angle and the lever principle, the driving force of the butterfly valve is greatly reduced, the linear speed when a sealingring and the valve seat are in press fit is greatly reduced, and the service life of the valve is effectively improved.

Classifications:

International (IPC 8-9): F16K1/22 F16K1/226 F16K1/48 F16K27/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN101893103 A	20101124	CN201010131508	20100226
CN101893103 B	20130130	CN201010131508	20100226
CN201836403 U	20110518	CN201020140792U	20100226

Priority:

CN200920013890U 20090522 CN201010131508 20100226 CN201020140792U 20100226

Probable Assignee:

WU SHUYUAN

Assignee(s): (std):

WU SHUYUAN

Inventor(s): (std):

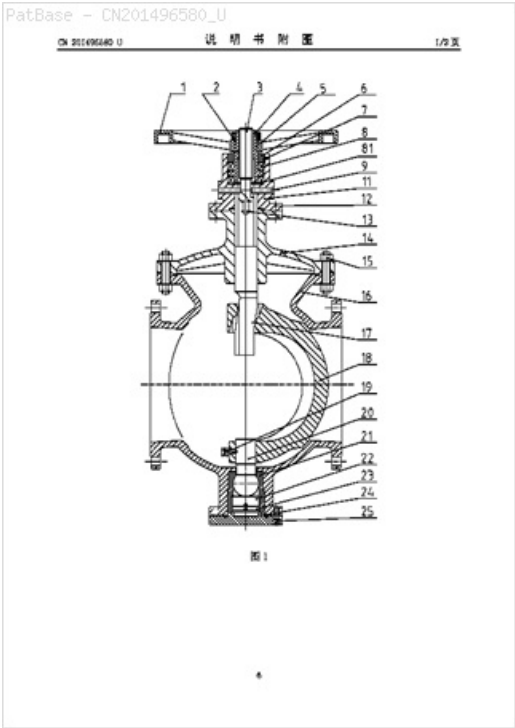
DI WU ; WU DI

Title: Non-wear block **valve**

Abstract: The utility model discloses a non-wear block **valve**; a hemisphere (18) is a **valve sealing** part, and hard **sealing** is adopted between a spherical **sealing surface** of the hemisphere and a cone-shaped **sealing surface** of a **valve** body (16); an upper **valve** rod (3) is provided with a guide groove (13); a bracket (11) is provided with a guide pin (9), one end of which is inserted into the guide groove (13) to **driven** the upper **valve** rod (3) to move along the locus of the guide groove (13); the lower end of the upper **valve** rod (3) is provided with an inclined plane (17); a **cam** fitting mechanism is formed by the inclined plane (17) and a square ear hole arranged at the upper part of the hemisphere (18); an ear hole arranged at the lower part of the hemisphere (18) is internally inserted with a lower **valve** rod (20) which is arranged at the same axial line as the upper **valve** rod (3); and the end part of the lower **valve** rod (20) is arranged inside an axle hole at the bottom of the **valve** body (16). The non-wear block **valve** has the advantages of resisting high temperature and abrasion, being low in flow resistance, small in volume and light in weight and producing wide-aperture products.

Classifications:

International (IPC 8-9): F16K1/24 F16K1/36 F16K1/48
F16K27/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
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Priority:

CN200920308913U 20090826

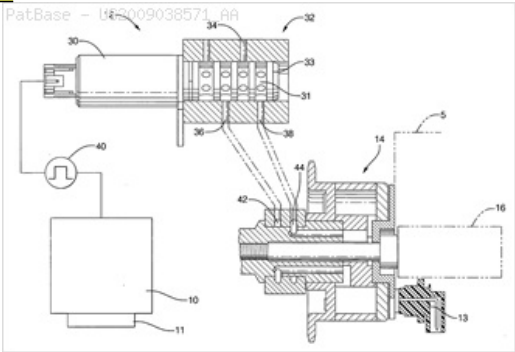
Probable Assignee: HUNAN PUMP VALVE MANUFACTORY CO LTD
Assignee(s): (std): HUNAN PUMP VALVE MANUFACTORY CO LTD
Assignee(s): HUNAN PUMP VALVE MANUFACTORY CO
Inventor(s): (std): DA TENG ; TIEQIANG ZHU ; ZHIPENG LI ; ZONGHAI ZHANG
Inventor(s): ZHU TIEQIANG ; ZHANG ZONGHAI ; LI ZHIPENG ; TENG DA

Title: OIL CONTROL VALVE FOR VARIABLE CAM PHASER

Abstract: An oil control valve for a variable cam phaser has a secure steel-to-steel fit between the secondary plate of the bobbin and the frame owing to a shoulder formed in the frame against which the secondary plate abuts, and also owing to an o-ring disposed between the bobbin and frame. This prevents oil from leaking into the electrical connector of the valve, which advantageously can be oriented parallel to the axis of the valve.

Classifications:

International (IPC 8-9): F01L1/344 F01M1/16 F15B13/044 F16K27/02 F16K31/06 H01F7/16 (Advanced/Invention); F01L1/344 F01M1/16 F15B13/00 F16K27/02 F16K31/06 H01F7/08 (Core/Invention)
CPC: F01L1/3442 F01L2001/34426 F01L2001/3443 H01F7/128
European: F01L1/344E R01L1/344E1A R01L1/344E1A1 T01F7/128
US: 123/90.33 123/90.330P



Family:

Publication number	Publication date	Application number	Application date
EP2025885 A2	20090218	EP20080161391	20080729
EP2025885 A3	20090415	EP20080161391	20080729
US2009038571 AA	20090212	US20070891080	20070809

Priority:

US20070891080 20070809

Probable Assignee: DELPHI TECHNOLOGIES INC

Assignee(s): (std): AVILA MIGUEL I ; DELPHI TECH INC ; SUBRAMANIAN VISWANATHAN

Assignee(s): DELPHI TECHNOLOGIES INC

Inventor(s): (std): AVILA MIGUEL I ; SUBRAMANIAN VISWANATHAN

Agent(s): ROBERT VINCENT ET AL; DELPHI TECHNOLOGIES INC

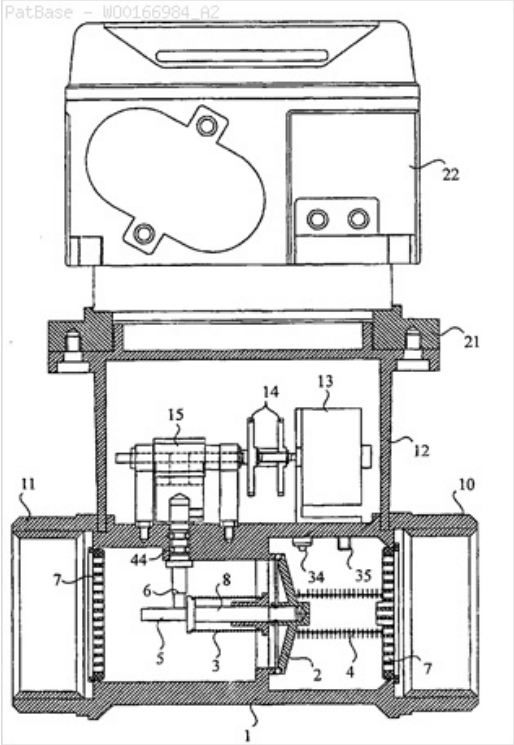
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK TR

Title: INTELLIGENT VALVE

Abstract: The electrically operated gas valve consists of the valve body (1), the valve flap (2) with a movable head, located in the said valve body (1) and placed on a sliding axis (8), a flap spring (3) and flap stabilization spring (4), a cam (5) that serves to open and close the flap (2) by pushing the said axis (8), a cam shaft (6) rotating the cam (5), a worm gear (15) and its counter gear (16), the electric motor (13) which drives the gears (14), a microswitch cam (17) that reports the position of the flap (2) and the control unit (22) wherein the local assessment and control unit (24) providing the opening /closing of the valve and the valve control and measurement unit (30) are contained as well as the pressure sensor (35) measuring the gas pressure in the valve, the heat sensor (34) the acceleration sensor (36) measuring the vibration and the flanges (9) with movable heads that provide easy connection to the flange pipes.

Classifications:

International (IPC 8-9): F16K1/12 F16K27/02 F16K31/04 F16K31/524 (Advanced/Invention); F16K1/00 F16K27/02 F16K31/04 F16K31/52 (Core/Invention)
International (IPC 1-7): F16K1/12 F16K27/02
CPC: F16K27/029 F16K31/04 F16K1/12 F16K27/0281 F16K31/52433
European: F16K1/12 F16K27/02H F16K31/04 F16K31/524B4



Family:

Publication number	Publication date	Application number	Application date
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AU200150740 A5	20010917	AU20010050740D	20010302
DE60120649 D1	20060727	DE20016020649	20010302
DE60120649 T2	20070531	DE20016020649T	20010302
EP1261823 A2	20021204	EP20010924080	20010302
EP1261823 B1	20060614	EP20010924080	20010302
ES2266191 T3	20070301	ES20010924080T	20010302
WO0166984 A2	20010913	WO2001TR00011	20010302
WO0166984 A3	20011213	WO2001TR00011	20010302

Priority:

TR20000000631 20000306 WO2001TR00011 20010302

Probable Assignee: KEFOGLU KEMAL OENDER

Assignee(s): (std): KEFOGLU KEMAL OENDER ; KEFOGLU KEMAL OENDER ; SUNGUR NAIM

Assignee(s): KEMAL OENDER KEFOGLU ; NAIM SUNGUR

Inventor(s): (std): KEFOGLU KEMAL OENDER ; SUNGUR NAIM ; KEFOGLU KEMAL OENDER

Inventor(s): NAIM SUNGUR ; KEMAL OENDER KEFOGLU

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

Title: VALVE BOTTOM (Machine translation)

Abstract: Source: RU39174U **Machine translation:** 1. Pneumatic valve bottom, the base comprising a plate having a through bore, the piston seal with the outer cylindrical surface is rigidly coupled to the base, the locking element is formed as a cylindrical glass worn by a piston movable in the aisle seat to the back and to form hermetic cavity between the bottom of the locking element and the end of the piston, communicating through channels in the base of the source control environment, helical compression spring, is urged by the locking element to the seat in the aisle base, manual backup drive, and the compression coil spring acts as a conical drive shaft connected to the base rotatable about its geometric axis, characterized in that the helical compression spring mounted between the lower part of the piston plunger and the stopper, manual backup drive is designed as a drive shaft is rigidly fixed to the middle part of the cam, the piston further comprises a support rack mounted plunger upper portion in the center of a cylindrical cup with a possibility of vertical displacement relative to the piston, a rigid connection with the base piston is designed as a lateral bolt connections.

Classifications:

International (IPC 8-9): F16K27/02 (Advanced/Invention)

International (IPC 1-7): F16K27/02

Family:

Publication number	Publication date	Application number	Application date
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Priority:

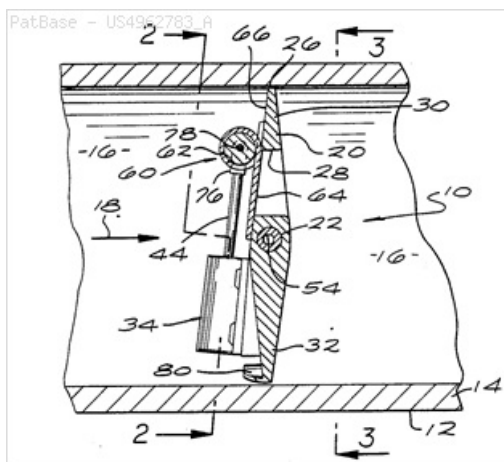
RU20030137113U 20031224

Title: BUTTERFLY **VALVE** APPARATUS AND METHOD

Abstract: A butterfly **valve** includes a duct defining a fluid flow path and a plate-like **valve** member pivotal in the duct to in one position open and close the latter. The **valve** member is pivotal to a second position spanning the duct and extending parallel to the flow path to allow fluid flow therein. Means are provided for altering the effective area distribution of the **valve** member about its pivot axis to effect opening and closing of the inventive **valve** in response to fluid pressure forces acting thereon.

Classifications:

International (IPC 8-9): A01C B64C13/40 B64G1/22 F16K1/22 F16K1/226 F16K15/03 F16K27/02 F16K31/163 F16K31/44 F16K31/528 F16K31/53 F16K31/54 F16T1/22 G05D7/06 (Advanced/Invention); B64G1/22 F16K31/44 G05D7/06 (Advanced/Non-invention); B64C13/00 B64G1/22 F16K1/22 F16K1/226 F16K15/02 F16K27/02 F16K31/16 F16K31/44 F16K31/52 F16T1/00 G05D7/06 (Core/Invention); F16K (Subclass/Invention)
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CPC: F16K31/5282 F16K15/03 Y10T137/7839 Y10T137/7841 Y10T137/7898 Y10T137/0318 Y10T137/86944 Y10T137/87378 Y10T137/87531 F16K27/029 Y10T137/0363 Y10T137/7761 Y10T137/86984 F16K1/222 F16K1/221 F16K1/2261 F16K15/035 F16K27/0218
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Family:

Publication number	Publication date	Application number	Application date
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Priority:

US19890374897	19890630	US19890395234	19890817	US19890422210	19891016
US19890422354	19891016	US19890422380	19891016	US19890426921	19891024
WO1990US03180	19900605	WO1990US03181	19900605	WO1990US03183	19900605
WO1990US03182	19900605	WO1990US03184	19900605	US19900533965	19900606
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WO1990US03471	19900620	US19900543991	19900626	WO1990US03615	19900626
WO1990US03641	19900628	US19910778429	19911016	US19920898225	19920612

Probable Assignee: ALLIEDSIGNAL INC

Assignee(s): (std): ALLIED SIGNAL INC

Assignee(s): ALLIED SIGNAL INC A CORP OF DE ; ALLIED SIGNAL INC MORRISTOWN N J ; ALLIED SIGNAL INC MORRISTOWN N J US ; ALLIEDSIGNAL INC ; BALL LARRY K ; TERVO JOHN N ; HINES MARSHALL U ; MILLER TERRY L

Inventor(s): (std): ANDERSON BLAINE ; ANDERSON BLAINE W ; TERVO JOHN N ; TERRY L MILLER ; MILLER TERRY ; MARSHALL U HINES ; LARRY K BALL ; JOHN N TERVO ; HINES MARSHALL U ; HINES MARSHALL ; BLAINE W ANDERSON ; BALL LARRY K ; BALL LARRY ; ANDERSEN BLAINE W ; MILLER TERRY L ; TERVO JOHN

Inventor(s): ANDERSON BLAINE W TEMPE AZ 85283 US ; TERVO JOHN N SCOTTSDALE AZ 85253 US ; BALL LARRY K CHANDLER AZ 85226 US ; HINES MARSHALL U SCOTTSDALE AZ 85254 US ; MILLER TERRY L MESA AZ 85202 US ; TERVO JOHN N SCOTTSDALE AZ 85253 ; HINES MARSHALL U SCOTTSDALE AZ 85254 ; BALL LARRY K CHANDLER AZ 85226

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; GOWLING LAFLEUR HENDERSON LLP

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

Title: Shut-off **valve** with housing containing rotatable closure part

Abstract: At least one of the bearings (9, 10) of the spindle (7) on which the closure part (6) of a shut-off **valve** rotates is fitted with a guide bush (17, 18) which is mounted to be axially displaceable on a section (13, 14) on the associated spindle journal (15, 17) in the respective **valve** housing wall (11, 12). It also has an actuator having control members (19, 20) which convert rotary movement of the spindle in predetermined angle ranges into translational movement of the guide bushes. Radial compression forces can be exerted on the cladding (8) of chemically resistant plastic acting as **seal** between the housing walls and the closure part. Actuator preferably includes at least one sliding **cam** (21) with pressure sections (23, 23').

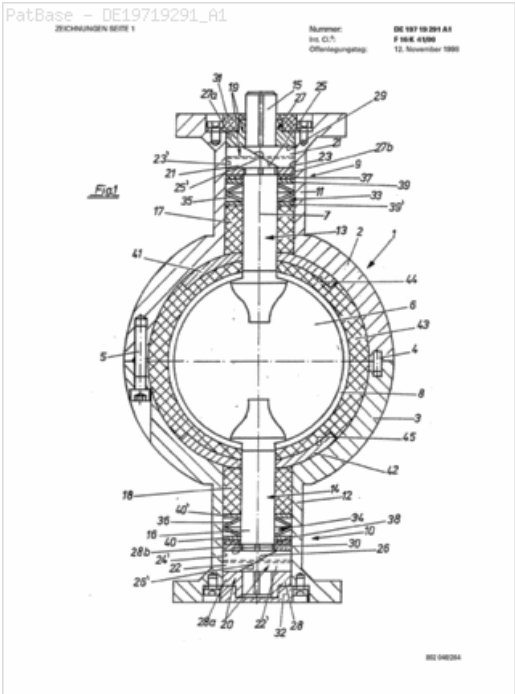
Classifications:

International (IPC 8-9): F16K1/228 (Advanced/Invention);
F16K1/226 (Core/Invention)

International (IPC 1-7): F16K1/34 F16K41/00

CPC: F16K1/228

European: F16K1/228



Family:

Publication number	Publication date	Application number	Application date
DE19719291 A1	19981112	DE19971019291	19970507

Priority:

DE19971019291 19970507

Probable Assignee: NOCADO ARMATURENFAB GMBH AND CO

Assignee(s): (std): NOCADO ARMATURENFAB GMBH AND CO

Assignee(s): NOCADO ARMATURENFABRIK GMBH AND CO KG ; NOCADO ARMATURENFABRIK GMBH AND CO KG 26629 GROSEF ; NOCADO ARMATURENFABRIK GMBH AND CO KG 26629 GROSEFEHN DE

Inventor(s): (std): GEHLKER WESSEL DR ING ; SAATHOFF GUENTER DIPL ING

Inventor(s): SAATHOFF GUENTER DIPL ING 26835 HESEL DE ; GEHLKER WESSEL DR ING 26789 LEER DE

Title: Pipe coupling with in-coupling flow controller

Abstract: A segmented pipe coupling provides a housing for a butterfly **valve**, and preferably is provided with oppositely angled end **faces** of saw tooth configuration at the respective ends of the coupling segments, thus allowing the inclined end **faces** to emerge at the axial end **faces** of the coupling at or closely adjacent to the X-Z plane of an axially long coupling. A slow motion rotary **drive** for the butterfly **valve** also is provided.

Classifications:

International (IPC 8-9): F16K1/22 F16K27/02

F16L17/04 (Advanced/Invention);

F16K27/02 F16L17/00 (Core/Invention)

International (IPC 1-7): F16K1/22 F16K27/00 F16K27/02 F16K5/00

F16K51/00 F16L17/04 F16L21/06 F16L25/06 F16L29/00

CPC: F16K27/0218 F16L17/04

European: F16K27/02B2 F16L17/04

US: 251/148 251/306 251/367

PatBase - US5018704_A

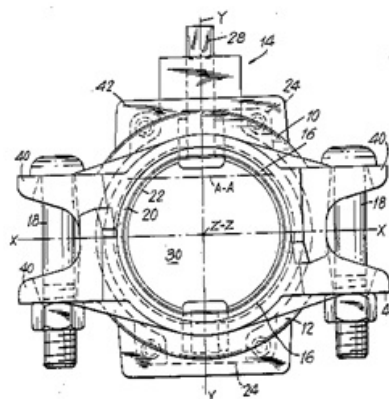
U.S. Patent

May 28, 1991

Sheet 1 of 8

5,018,704

FIG. 1



Family:

Publication number	Publication date	Application number	Application date
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US5018704 A	19910528	US19900465908	19900112

Priority:

US19900465908 19900112 CA19912033842 19910109

Probable Assignee: VICTAULIC CO OF AMERICA

Assignee(s): (std): MCLENNAN WILLIAM R ; VICTAULIC CO OF AMERICA ; VICTUALIC CO AMERICA ; VICTUALIC CO OF AMERICA

Assignee(s): VICTUALIC CO OF AMERICA EASTON PA US ; VICTAULIC COMPANY OF AMERICA ; MCLENNAN WILLIAM ROSS ; VICTAULIC CO

Inventor(s): (std): MCLENNAN WILLIAM R ; MCLENNAN WILLIAM ROSS

Inventor(s): MCLENNAN WILLIAM ROSS EASTON PENNSYLVANIA 18042 US ; WILLIAM ROSS MCLENNAN

Agent(s): WRAYS; WRAYS PTY LTD; KIRBY EADES GALE BAKER

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

Title: MEANS AND METHOD FOR IN-LINE REMOVAL OF SEAT RINGS IN BALL **VALVES**

Abstract: A ball **valve** structure has a removable upper cover plate (16) to permit the ball (34) to be removed from the **valve** body. A separate **cam** tool (90, FIGS. 8-10) after removal of the cover plate is positioned within the bore of the ball which has been partially rotated from the full open position, and upon a return rotation of the ball with the **cam** tool therein to a full open position an adjacent spring urged seat ring (58) is **cammed** away from the ball to a retracted position. A seat ring retainer (82) is then actuated to hold the seat ring in the retracted position. The **cam** tool is then utilized in a similar manner to **cam** the other opposite seat ring in retracted position. The ball may then be removed with the seat rings for replacement or repair as desired. The seat rings and **seals** (70) thereon may be removed and replaced in such manner without removal of the **valve** from the flowline in which the **valve** is positioned.

Classifications:

International (IPC 8-9): F16K27/06 F16K43/00

F16K5/06 (Advanced/Invention);

F16K27/06 F16K43/00 F16K5/06 (Core/Invention)

International (IPC 1-7): F16K1/18 F16K1/34 F16K25/00 F16K27/06

F16K43/00 F16K5/00 F16K5/04 F16K5/06 F16K5/18 F16K5/20

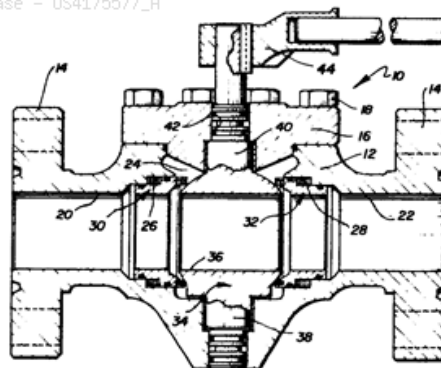
G01N15/02

CPC: Y10T137/0508 F16K5/0636 F16K43/00

European: F16K43/00 F16K5/06F4

US: 137/15 137/15.22 251/174 251/315.08 251/315.12 251/315.16

PatBase - US4175577_A



Family:

Publication number	Publication date	Application number	Application date
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AU532525 B2	19831006	AU19790046576	19790501
CA1097602 A1	19810317	CA19790325007	19790404
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US4175577 A	19791127	US19780902324	19780503

Priority:

US19780902324 19780503 CA19790325007 19790404 EP19790890002 19790502

Probable Assignee: COOPER CAMERON CORP

Assignee(s): (std): ACF IND INC

Assignee(s): COOPER CAMERON CORP ; COOPER IND ; COOPER IND INC ; JOY MFG ; JOY MFG CO ; KACAL GARY W ; PARTRIDGE CHARLES C ; A C F IND INC

Inventor(s): (std): CHIYAARUZU SHII PAATORITSUJI ; GEERII DABURIYUU KAAKARU ; KACAL GARY W ; PARTRIDGE CHARLES C

Inventor(s): GARY W KACAL ; CHARLES C PARTRIDGE

Agent(s): GRIFFITH HASSEL AND FRAZER; RIDOUT AND MAYBEE LLP

Designated states: AT DE FR GB IT

Title: CLOSURE-ASSISTED CARTRIDGE-TYPE FLOW CONTROL VALVE

Abstract: A closure-assisted valve includes a cartridge insertable into, and removable from, the remainder of the valve structure. The cartridge includes a displaceable piston having an elastomeric sealing member at one end engageable with a flat-surfaced valve seat. At the other end, the piston includes a drive surface against which a rotatable drive member is engaged. In a preferred embodiment, certain relatively movable portions of the cartridge include a cam surface and a cam follower. The cam surface is contoured such that the piston is advanced toward a valve closed position upon rotation of the drive member, but the last portion of piston travel prior to valve closure is only under the influence of gravity and fluid forces. In order to bias the piston toward a valve closed piston, entering fluid is directed around the piston so as to aspirate the piston toward a closed position. Upwardly extending channels divert a portion of the incoming fluid upwardly around the piston and thereafter downwardly against a face of the piston spaced from the valve seat. The pressure of the fluid against the face assists in constantly urging the piston toward a valve closed position. Other embodiments of the cartridge are disclosed, as well as a technique for manufacturing a spout included as part of a faucet assembly and a technique for attaching the faucet assembly to a mounting surface.

Classifications:

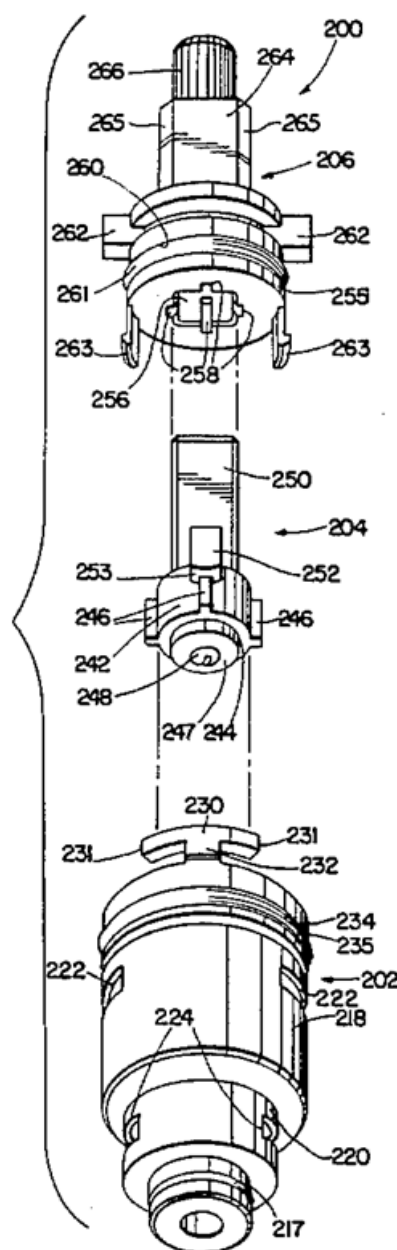
International (IPC 8-9): E03C1/04 F16K27/02 (Advanced/Invention)
International (IPC 1-7): E03C1/04 F16K1/32 F16K27/02 F16K31/524 F16K43/00

CPC: Y10T137/6017 Y10T137/6103 Y10T137/7613 Y10T137/7668
 E03C1/0402 E03C1/0401 F16K27/02

European: E03C1/04B E03C1/04B2 F16K27/02

US: 137/315 137/315.13 137/315.39 137/454.5 137/454.6 251/175 251/252 251/82

PatBase - US4557288_A

**Family:**

Publication number	Publication date	Application number	Application date
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GB2157404 A1	19851023	GB19850012681	19850520
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US4557288 A	19851210	US19820408448	19820816

Priority:

US19790052976 19790628 US19810286949 19810727 US19820408448 19820816
 GB19830021985 19830816

Probable Assignee: JOSAM DEVELOPMENTS INC

Assignee(s): (std): BOTNICK I H ; BOTNICK IRLIN HOWARD ; JOSAM DEVELOPMENTS INC

Assignee(s): IRLIN HOWARD BOTNICK ; BOTNICK IRLIN H

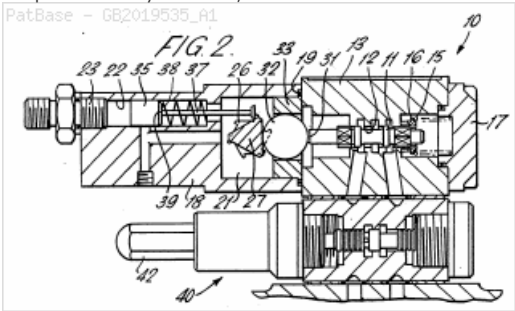
Inventor(s): (std): BOTNICK IRLIN HOWARD ; BOTNICK IRLIN H

Inventor(s): IRLIN HOWARD BOTNICK

Title: Fluid Operated **Valves**

Abstract: A multi-way **valve** 10 comprises a spool 11 slidable within a housing 13, and a **cam** 27 rotated by fluid pressure means 35, 22 to move the spool against the action of a spring 15. A ratchet wheel 26 fixed to the **cam** shaft is engaged by a rod 37 extending from the piston 35 of the fluid pressure means. The **valve** is formed as a module, the ends of the **cam** shaft being keyed for interfitting with similar shafts. The **valve** 10 is used as a main **valve** or pilot **valve** in the control of a hydraulic ram, a sequence **valve** 40 controlling the supply of fluid to the piston and cylinder 35, 22.

Classifications:
International (ipc 8-9): F15B13/04 F16K11/22 F16K27/02 (Advanced/Invention); F15B13/00 F16K11/10 F16K27/02 (Core/Invention)
International (ipc 1-7): F16K31/363
CPC: F15B13/0402 F16K11/22 F16K27/0209
European: F15B13/04B2 F16K11/22 F16K27/02B



Family:

Publication number	Publication date	Application number	Application date
GB2019535 A1	19791031	GB19790020227	19790611

Priority:
GB19780009599 19780310 GB19790020227 19790611

Probable Assignee: B AND G HYDRAULICS LTD

Assignee(s): (std): B AND G HYDRAULICS LTD

Title: HEAD FOR CONNECTION TO REPLACEABLE GAS CARTRIDGE

Abstract: An improved connection head for use in a portable lighting or cooking or heating device burning gas from a replaceable cartridge which has in one of its walls a check **valve** inwardly displaceable to release stored gas to the connection head, the head comprising a casing having a bore disposed opposite said cartridge check **valve**, a sleeve reciprocable in the casing bore, a rod extending through the casing and the sleeve coaxially therewith, spring means urging the rod toward the cartridge to displace its check **valve**, the sleeve having annular packing disposed to **seal** against the wall of the cartridge around the check **valve**, and these parts being provided with inter-engaging abutments such that the spring means urges the rod toward the check **valve** and the rod urges the sleeve to **seal** against the wall of the cartridge around the check **valve**, the force of the spring being sufficient to displace the check **valve** but insufficient to puncture the wall of a cartridge, and the rod having a conical **surface** operative with said annular packing to control the rate of flow of gas from the cartridge.

Classifications:

International (IPC 8-9): F16L41/04 F17C1/00 F17C13/04 F23D14/28 F24C3/14 (Advanced/Invention);

F16L41/00 F17C1/00 F17C13/04 F23D14/00 F24C3/00 (Core/Invention)

International (IPC 1-7): B65D83/14 F16K1/34 F16K31/524

F16L41/08 F17C13/00 F17C13/04 F17C7/02 F23D13/04 F24C3/14

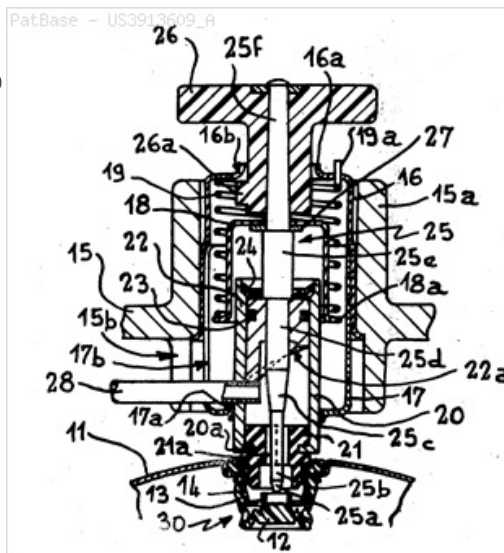
CPC: F17C2270/0736 F17C2205/0323 F17C2205/0329

F17C2205/0335 F17C2205/0382 F17C2270/0709 F24C3/14

F16L41/04 F17C13/04 Y10T137/6137

European: F16L41/04 F17C13/04 F24C3/14

US: 137/322 222/402.14

**Family:**

Publication number	Publication date	Application number	Application date
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FR2206474 A1	19740607	FR19720040621	19721110
FR2206474 B1	19750103	FR19720040621	19721110
GB1448463 A	19760908	GB19730052490	19731112
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JP49135211 A2	19741226	JP19730126727	19731110
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SE393851 B	19770523	SE19730015220	19731109
SE393851 C	19770901	SE19730015220	19731109
US3913609 A	19751021	US19730415134	19731112

Priority:

FR19720040621 19721110

Probable Assignee: APPLIC GAZ SA

Assignee(s): (std): APPLIC GAZ SA

Assignee(s): APPLICATION DES GAZ ; APPLICATIONS DES GAZ FR ; SOCIETE ANONYME APPLICATION DES GAZ PARIS ; SOCIETE ANONYME APPLICATION DES GAZ ; APPLICATION DES GAZ 15 RUE CHATEAUBRIAND PARIS FR ; APPLICATION DES GAZ SA ; APPLICATION DES GAZ 15 RUE CHATEAUBRIAND PARIS FRANCE ; ANONYME APPLICATION DES GAZ PARIS SOC ; ANONYME APPLICATION DES GAZ SOC

Inventor(s): (std): REMANE ROGER ; REMANE R

Inventor(s): R REMANE ; REMANE ROGER SAINTE COLOMBE RHONE FRANKREICH ; REMANE ROGER SAINTE COLOMBE RHONE

Title: WEB TIP SEAT CUP

Abstract: The specification and drawings disclose **valve** assemblies of the type often used for dispensing liquid foods and beverages. The disclosed **valves** each comprise a **valve** or nozzle body including a cylindrical **valve** chamber connected with a lateral inlet passage and an axial outlet passage. A **valve** seat is formed in the chamber about the outlet passage. In one of the embodiments, the seat is in the form of a flat shoulder located circumferentially about the outlet. In a second embodiment, the seat is a curved transition **surface** between the outlet passage and the cylindrical **valve** chamber. In both embodiments **valve** element in the form of a resilient cup member is carried at the end of a rigid stem and adapted to engage the seat. The stem and the cup member are continually spring biased toward the seat by a compression spring which acts between the **valve** member and a bonnet screwed to the top of the **valve** body. Movement of the **valve** member between opened and closed positions is accomplished through a manual handle connected pivotally to the upper end of the stem and having **camming surfaces** which engage the top of the bonnet. The **valve** element is formed so that the lower or **sealing** end includes a peripheral, downwardly extending flange or web of tapered cross-section terminating in a relatively narrow, circumferentially continuous band. The resilient web serves to overcome problems which tolerance stacking imparts in the assembly and provides excellent **sealing** with both types of seats. Claims, 7 Drawing Figures

Classifications:

International (IPC 8-9): F16K1/34 F16K23/00 F16K25/00 F16K3/24 F16K7/14 (Advanced/Invention);

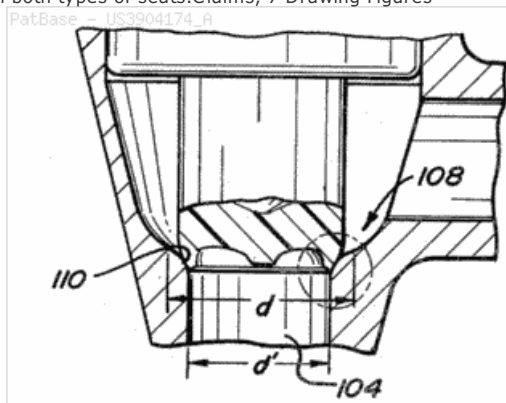
F16K1/32 F16K23/00 F16K25/00 F16K3/00 F16K7/12 (Core/Invention)

International (IPC 1-7): F16K23/00 F16K7/00 F16K7/12

CPC: F16K3/246 F16K23/00 F16K25/00 F16K1/34 F16K7/14

European: F16K1/34 F16K23/00 F16K25/00 F16K3/24V F16K7/14

US: 251/251 251/331 251/333 251/335.1 251/335.2



Family:

Publication number	Publication date	Application number	Application date
US3904174 A	19750909	US19720300450	19721025
US4044998 A	19770830	US19750580630	19750527

Priority:

US19720300450 19721025 US19750580630 19750527

Probable Assignee: TOMLINSON IND INC

Assignee(s): (std): TOMLINSON IND INC

Assignee(s): TOMLINSON INDUSTRIES INC

Inventor(s): (std): GIESE ELROY J ; GIESE DECEASED ELROY J

Title: Diaphragm **valve** body flange construction

Abstract: 989,585. **Valves.** GRINNELL CORPORATION. July 15, 1963 [July 19, 1962], No. 27895/63. Heading F2V. [Also in Division B3] Making weir-type diaphragm **valve** bodies. (a) Pressing.-A carbon steel tube is heated to 1200° F. and then compressed between socketed die halves 14, 16, Fig. 7, to provide a bulged centre part 32; a core 34 limits movement of the die-halves. A rotary tool is employed to make an opening 12, Fig. 4, in the middle of the centre part 32 after which the tube is re-heated to 1200° F. and then disposed between dies 37, 38, Fig. 9. The base 43 of lower die 38 has a weir-shaping plate 44 surrounded by pins 45 slidable in a platform 48 urged upwardly by springs 50, one around each pin; an opening 52 in the platform 48 allows the passage of the plate 44. Whilst the weir is being shaped the tube 12 is held on the platform 48 by cradles 46 and opposed spring-loaded plungers 63 operated by **cams** 70 on the die base 43. The upper die 37 has cradles that co-operate with cradle 46 and a central part that shapes portions 80, Fig. 4, whilst the weir is being formed. The tube is again heated and placed between the dies, the lower one being unchanged whilst the upper is provided with a weir bar to give the upper weir **surface** 92 its final shape. (b) Machining.-The tube is then mounted on a lathe and a flange 98, Fig. 5, is cut around the opening 12 after which the tube is remounted so that the interior of the opening can be machined, the tool carriage being held at the proper cutting depth and withdrawn out of contact with the weir by a follower engaging a **cam** on the chuck. (c) Welding.-A diaphragm clamping plate is welded on the flange by an automatic plant consisting of a rotatable table 158, Fig. 20, on which the tube is held by a pair of piston and cylinder devices actuating shoes 172, whilst the plate 146 is urged against the flange 92 by clamps 178. The inner diameter of the plate is larger than that of the flange 1 whereby a groove for the weld is provided. The table is firstly tilted near to the welding equipment and then rotated. Excess weld metal is removed. The tube ends are shortened and then flanged or threaded for connection to a pipe system. Making weir-less type diaphragm **valve** bodies. The body is formed by inserting a heated tube between two dies 192, 194, Fig. 24, the tube being filled with an incompressible material, e.g. Wood's metal, which is pressurized by a plunger 208. The cap portion of the diaphragm opening is machined away to open into the tube bore and a flange is welded in position; the flange and walls of the diaphragm chamber are then "dressed" by a single rotary tool.

Classifications:

International (IPC 8-9): B21C37/29 B21K1/24 F16K27/02 F16K7/12 F16K7/14 (Advanced/Invention); B21C37/15 B21K1/00 F16K27/02 F16K7/12 (Core/Invention)

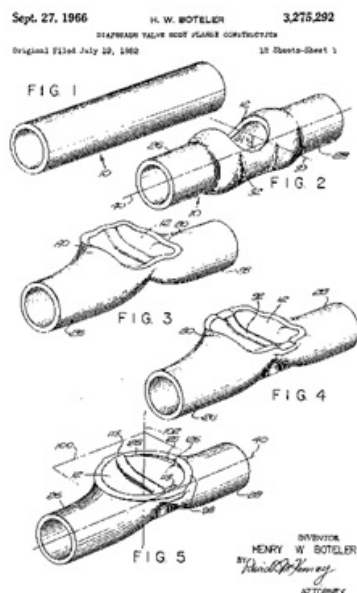
International (IPC 1-7): F16K27/00 F16K7/06

CPC: Y10T29/49419 Y10T29/49421 Y10T29/4981 B21C37/29 B21K1/24 F16K7/12 F16K7/14 F16K27/0236

European: B21C37/29 B21K1/24 F16K27/02C F16K7/12 F16K7/14

US: 228/170 228/173.4 251/331 251/366 29/423 29/890.128 29/890.129

PatBase - US3275292_A



Family:

Publication number	Publication date	Application number	Application date
DE1450561 A1	19690327	DE19631450561	19630719
DE1450561 B2	19720224	DE19631450561	19630719
GB989585 A	19650422	GB19630027895	19630715
NL295532 A	19650510	NL19630295532	19630719
US3251122 A	19660517	US19620210984	19620719
US3275292 A	19660927	US19650502938	19651023

Priority:

US19620210984 19620719 US19650502938 19651023

Probable Assignee: GRINNELL CORP

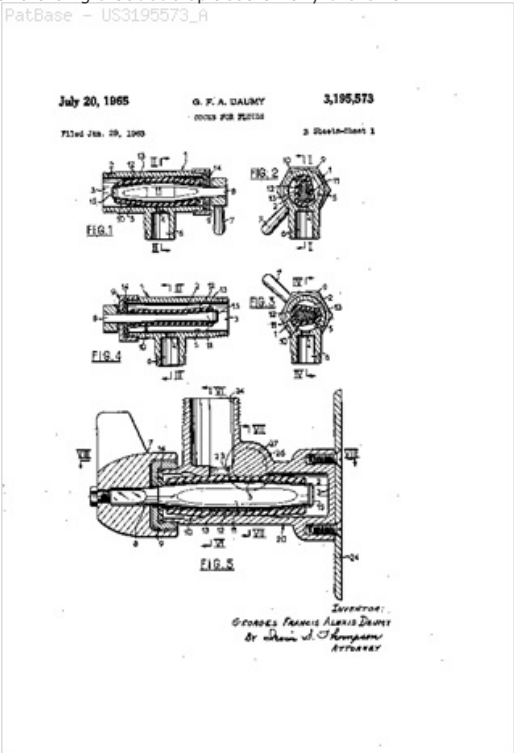
Assignee(s): (std): GRINNELL CORP

Inventor(s): (std): WATSON BOTELER HENRY ; BOTELER HENRY W

Title: COCKS FOR FLUIDS

Abstract: 959,651. **Valves.** RIBSAN S.a.r.L. Feb. 12, 1963 [Feb. 13, 1962; May 8, 1962], No. 5732/63. Heading F2V. An outlet 4 from a cylindrical body 1 having an inlet 3 at one end is controlled by a rubber and c. sleeve 13 enclosing a **cam** 11 between which and the sleeve is a sheath 12 of low friction material, such as a polyamide, which allows the **cam** to be rotated to deform the sleeve without twisting it or the sheath. The sheath is closed at one end 15 to **seal** the **cam** from the controlled fluid and has a flange 14 at the other end clamped by a cover 9. Also described is a mixing **valve** having two radial -inlets in a common plane transverse to the axis of the body 1 and a single outlet displaced axially therefrom.

Classifications:
International (IPC 8-9): F16K7/06 F16K7/07 (Advanced/Invention)
International (IPC 1-7): F06K F16K1/34 F16K3/28 F16K5/00 F16K7/02 F16K7/06
CPC: Y10S251/901 F16K7/07 F16K7/06 Y10T137/86815
European: F16K7/06
US: 137/625.4 251/257 251/261 251/901



Family:

Publication number	Publication date	Application number	Application date
AT245322 B	19660225	AT19630001134	19630213
CH390644 A	19650415	CH19630001762	19630213
FR1323661 A	19630412	FR19623804434	19620213
FR81659 E	19631025	FR19620896814	19620508
GB959651 A	19640603	GB19630005732	19630212
SE300172 B	19680408	SE19630001502	19630212
US3195573 A	19650720	US19630254770	19630129

Priority:
FR19620004434 19620213 FR19623804434 19620213 FR19620896814 19620508

Probable Assignee: ROBINETTERIE IND POUR LE BATIM

Assignee(s): (std): RIBSAN SA ; RIBSAN SARL ; ROBINETTERIE IND POUR LE BATIM

Assignee(s): ROBINETTERIE INDUSTRIELLE POUR LE BATIMENT LE SANI ; ROBINETTERIE INDUSTRIELLE POUR LE BATIMENT LE SANITAIRE ET LES APPLICATIONS NUCLEAIRES RIBSAN S A R L ; ROBINETTERIE INDUSTRIELLE POUR LE BATIMENT LE SANITAIRE ET LES APPLICATIONS NUCLEAIRES R I B S A N ; RIBSAN S A R L

Inventor(s): (std): FRANCIS ALEXIS DAUMY GEORGES ; DAUMY GEORGES FRANCIS ALEXIS ; DAUMY G ; ALEXIS DAUMY GEORGES FRANCIS

Title: FLUSHING MEANS FOR A GRAIN DISCHARGE **VALVE**

Abstract: (Claim 1) 1. In a steeping tub having a bottom, an annular **valve** seat attached to said bottom, a hinged **valve** cover attached to said bottom and movable between a closed position in which said **valve** cover engages said **valve** seat and an open position in which said **valve** cover is disengaged from said **valve** seat, said **valve** seat having an overhanging peripheral flange and said **valve** cover having a peripheral ledge positioned to engage said peripheral flange in the closed position of said **valve** cover, and means for moving said **valve** cover between the open and closed positions thereof, the improvement comprising a plurality of passageways formed in said annular **valve** seat, said passageways being directed between said peripheral flange and said peripheral ledge, an annular manifold attached to said bottom, a plurality of conduits each connected between a corresponding one of said passageways and said annular manifold, a source of fluid under pressure coupled to said manifold, flushing **valve** means coupled between said fluid source and said manifold, a solenoid **valve** actuator connected to said flushing **valve** means for opening and closing said flushing **valve** means, **cam** means coupled to said hinged **valve** cover and movable therewith, switch means engageable by said **cam** means to be actuated thereby when said **valve** cover approaches its closed position and to be de-actuated thereby when said **valve** cover reaches its closed position, and said switch means being electrically coupled to said solenoid **valve** actuator to open said flushing **valve** means in response to the actuation of said switch means and to close said flushing **valve** means in response to the de-actuation of said switch means, thereby automatically flushing said peripheral flange and peripheral ledge with jets of fluid directed thereto by said passageways prior to the closing of said **valve** cover.

Classifications:

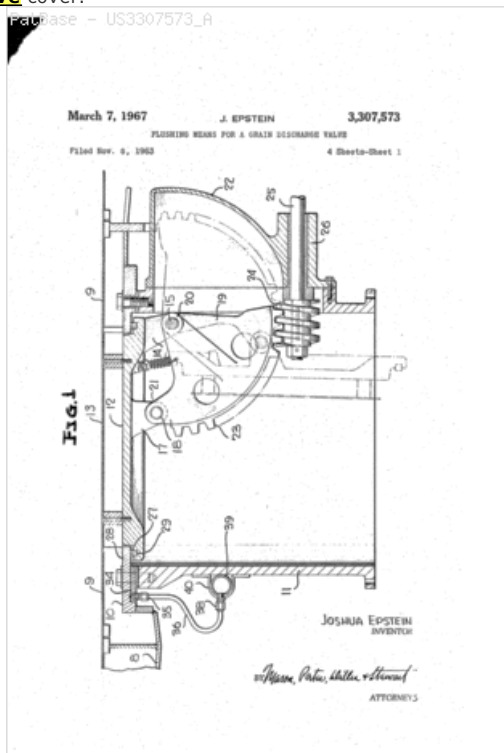
International (IPC 8-9): C12C7/14 F16K1/20 (Advanced/Invention);
C12C7/00 F16K1/18 (Core/Invention)

International (IPC 1-7): F16K1/34

CPC: F16K1/2007 F16K1/2028 C12C7/14 Y10T137/4259
Y10T137/4379

European: C12C7/14 F16K1/20

US: 137/240 137/246.13 210/172.1 251/249.5 251/298



Family:

Publication number	Publication date	Application number	Application date
US3307573 A	19670307	US19630322459	19631108

Priority:

US19630322459 19631108

Probable Assignee: ACME PROCESS EQUIPMENT CO

Assignee(s): (std): ACME PROCESS EQUIPMENT CO ; ACME PROCESS EQUIPMENT COMPANY

Inventor(s): (std): JOSHUA EPSTEIN

Inventor(s): EPSTEIN JOSHUA

Title: Improvements in or relating to fluid-flow control **valves**

Abstract: 918,493. **Valves**. REGIE NATIONALE DES USINES RENAULT. March 23, 1959 [March 24, 1958], No. 9967/59. Addition to 856,275. Class 135. Fluid flow from an inlet 304, Fig. 1, to an outlet 324 is controlled by a resilient **valve** closure 301 having a head 311, a shoulder 312, a disc part 305, a stem 306 and a perforated flange 307 which is under stress and urges the shoulder 312 on to a seat 308; the closure 301 embodies orifices 309, 310. The head 311 forms a seat for an annular movable closure 321 on the inner end of a push rod 315, provided with **seals** 316, 317, and retained by a nut 319 between which and the push rod is a resilient bellows 320; the closure 321 controls communication between the outlet 324 and an exhaust duct 327. The push rod 315 is actuated by a flexible lever 328, e.g. of plastic material, and a **cam** or manual means. When the push rod 315 is depressed the closure 321 abuts the head 311 and moves the closure 301 from the seat 308 against the resilience of the flange 307, thereby connecting the inlet 304 with the outlet 324 via the orifices 309, 310. Upon releasing the push rod the closure 321 returns to the position shown wherein it is spaced from the head 311, and the flange 307 also restores the closure 301 to engage its seat 308 so that the outlet 324 is open to the exhaust duct 327. A throttle, not shown, may be arranged in the exhaust duct. In a modification, the push rod is replaced by a fluid-actuated piston; the latter is provided with resilient buffers to cushion its movement at the end of each stroke. In another modification, the exhaust **valve** is formed by a resilient packing on the push rod which overlies holes in the top of the **valve** body; the packing also prevents the ingress of dust.

Classifications:

International (IPC 8-9): E04D3/08 F16K1/34 F16K15/14 F16K31/06 F16K7/12 (Advanced/Invention);

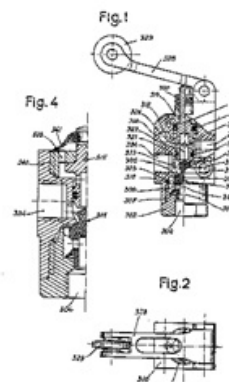
E04D3/02 F16K1/32 F16K15/14 F16K31/06 F16K7/12 (Core/Invention)

International (IPC 1-7): F06K F16K11/04 F16K41/10 F16K7/12

CPC: F16K1/34 F16K7/12 F16K15/14 F16K31/0651 F16K31/0655 E04D3/08 E04D2003/0812 E04D2003/0818

European: E04D3/08 F16K1/34 F16K15/14 F16K31/06C4 F16K31/06C6 F16K7/12 P04D3/08P2 P04D3/08P3

PatBase - GB918493_A



Family:

Publication number	Publication date	Application number	Application date
BE576282 A4	19590701	BE19590576282	19590302
BE576282 R	19590701	BE19590576282	19590302
FR1142760 A	19570923		19560218
FR69282 E	19581023		00000000
FR69554 E	19581110		00000000
FR70998 E	19590930		00000000
FR73258 E	19600708	FR19580761366	19580324
GB918493 A	19630213	GB19590009967	19590323

Priority:

19560218 FR19580761366 19580324

Probable Assignee: RENAULT

Assignee(s): (std): RENAULT

Assignee(s): REGIE NATIONALE DES USINES RENAULT

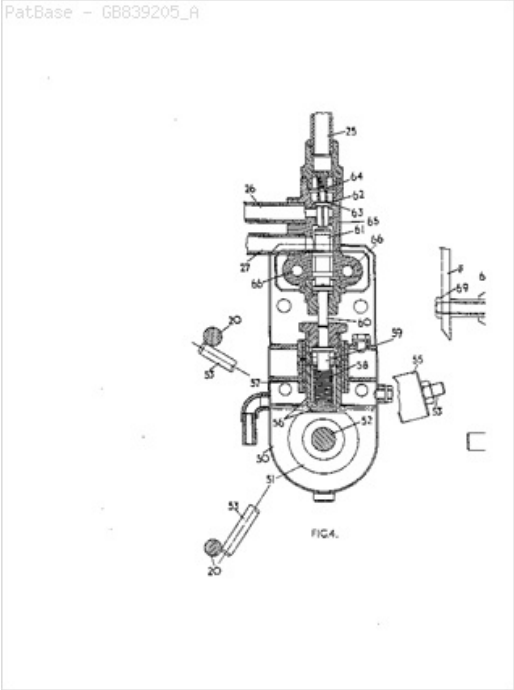
Inventor(s): (std): PATURLE PAUL

Title: IMPROVEMENTS IN AND RELATING TO CONTINUOUS VACUUM FILTERS

Abstract: 839,205. Filters. COAL INDUSTRY (PATENTS) Ltd. Nov. 21, 1957 [Nov. 30, 1956], No. 36721/56. Class 46. [Also in Group XXIX] A chamber 1, Fig. 1, which is connected to a source of compressed-air, has an outlet controlled by a plate lift-**valve** closure 3 seating on a ring 4 of rubber or similar resilient material or a metal seat; the closure 3 is formed with a hollow stem 15 having an end member 14 whilst in the stem is a spring 5, the ends of which abut the closure 3 and a shoulder 6 on a rod 7 connected to a diaphragm 10; more than one spring 5 may be used and the diaphragm 10 is supplied with air from chamber 1. Upon admitting air to the diaphragm 10 the closure 3 is rapidly opened by the rod 7 and/or the spring 5, the closure movement being stopped by a rubber or like resilient buffer 13; air from chamber 1 flows into a further chamber 16 having both a connection 17 to a continuous vacuum filter and a one-way **valve** 45 for relieving partial vacuum in the filter whilst the air blast ports of any given section of the filter are opening and prior to unseating of the closure 3. The rod 7 passes through a **seal** 18 in the wall of chamber 16. After the closure 3 has been unseated the supply of air to the diaphragm 10 is interrupted and the latter is connected to atmosphere whilst a spring 19 returns the parts to the positions shown. In a modification (not shown) the spring 19 is disposed on the closure side of diaphragm, a greaser is provided for the **seal** 18, and the **valve** 45 comprises an annular closure movable on a central journal to and from an annular seat extending round a ring of apertures in the **valve** housing. The sequential supply and exhaust of air to and from the diaphragm to produce blasts of air in the connection 17 is obtained by means of a four-lobed **cam** 22, Fig. 3, with four arms 28 by which the **cam** is rotated by pegs 20 on the filter drum 19; each **cam** controls the operation of a **valve** 23 having a compressed air inlet 25, a diaphragm connection 26 and an atmospheric connection 27; a spring plunger 24 is interposed between each **valve** and its **cam**. The timing of the air blast is adjustable by varying the position, form, dwell or radial length of the **cam**. A regulating **valve** (not shown) may be inserted in the exhaust connection of **valve** 23 to enable the diaphragm to be maintained in the operative position thereby keeping the **valve** 3 open; the regulating **valve** may be partially closed to reduce the rate of discharge from the diaphragm. In a modification (not shown) the **valve** 23 is actuated by levers rotated by the stops 20. In another modification, the diaphragm is replaced by a solenoid and an adjustable stop is provided to enable the closure to be permanently held open when desired. The energisation of the solenoid is controlled by the **cam** 22 and electrical relay switches may be used. An alternative form of the **valve** 23 comprises an oil bath 50, Fig. 4, housing a **cam** 51 on a shaft 52 to which is secured an arm 53 supporting an adjustable return weight 55; coacting with the **cam** is a hollow follower 56 containing a spring 58 loading a plunger 59 which via plungers 60, 61 operates a spring-loaded liftvalve closure 62 controlling the passage of air from the inlet 25 to the diaphragm connection 26. When the closure 62 is unseated the plunger 61 closes the passage between connection 26 and atmospheric connection 27; when the closure 62 is seated connections 26, 27 are in communication to open the diaphragm chamber to atmosphere. The **valve** casing 65 is adjustably attached to the filter frame. In a final modification, the closure 3, Fig. 1, may be operated by a flexible control cable.

Classifications:

International (IPC 8-9): B01D33/00 F16K1/34 (Advanced/Invention);
B01D33/00 F16K1/32 (Core/Invention)
International (IPC 1-7): B01D33/08
CPC: F16K1/34 B01D33/21 B01D33/801
European: B01D33/00A1A8 B01D33/00A1B26 B01D33/00A2
B01D33/08 F16K1/34



Family:

Publication number	Publication date	Application number	Application date
GB839205 A	19600629	GB19560036721	19561130

Priority:

GB19560036721 19561130

Probable Assignee: COAL IND PATENTS LTD
Assignee(s): (std): COAL IND PATENTS LTD ; COAL INDUSTRY PATENTS LTD
Assignee(s): COAL INDUSTRY PATENTS LIMITED
Inventor(s): (std): BURNS ALAN NORMAN ; HIRST ARTHUR ALGERNON

Title: Improvements in or relating to **valves**, particularly for fluids at high pressure

Abstract: 35852. [Class 135.] In a **valve** for high pressure fluid systems in which a **valve** block 14 having a circular recess to accommodate a soft seating disc 16 of rubber or the like acts normally as a non-return **valve**, but may be opened by a releasing rod 24 passing through the sharp tubular seat 17 to allow the passage of fluid in both directions, the inner end of the rod 24 is extended radially to form a flat **surface** 27 co-operating with the disc 16, and for adequate guiding purposes, the length of the block 14 is substantially equal to the internal diameter of the housing 10 in which it is slidably mounted. Grooves 15 in the **valve** block allow the fluid to pass. The rod 24 passes through a stuffing box in a detachable plug 23 and is pressed inwardly by a lever 28, the movement of which is limited by a lug 30. The block 14 may be pressed to its seat by a spring 31. The end of the housing opposite the plug 23 has an adaptor 18 which is connected to a reservoir. The port 11 communicates with a pump or compressor. In a modification in which the **valve** block is substantially of square section, but has rounded corners, the seat is a detachable member screwed into the **valve** housing, and the releasing rod which screws into the plug 23 is operated by a handwheel so that the **valve** can be opened permanently. According to the Provisional Specification, the rod 24 may be actuated by a **cam**, the plug 23 and the **valve** seat may be formed as a single detachable member, and the relative positions of the soft disc 16 and the sharp seat 17 may be reversed. Specification 329,654, [Class 135], is referred to.

Classifications:

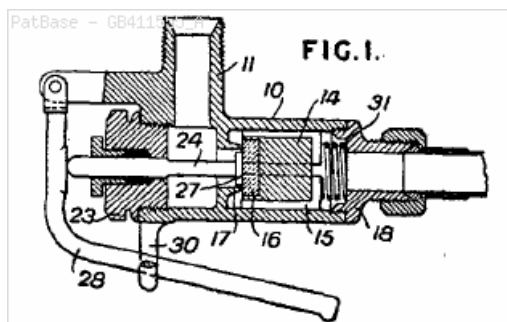
International (IPC 8-9): F16K1/34 (Advanced/Invention);

F16K1/32 (Core/Invention)

International (IPC 1-7): F02M37/00

CPC: F16K1/34

European: F16K1/34



Family:

Publication number	Publication date	Application number	Application date
GB411555 A	19340614	GB19320035852	19321217

Priority:

GB19320035852 19321217

Probable Assignee:

CHARLES FREDERIC HEYWOOD

Assignee(s): (std):

CHARLES FREDERIC HEYWOOD