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Search 4: washer (Results 225309)
Search 5: 3 and 4 (Results 19)

1) Family number: 20044617 (US2797581A)

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Title: GYROSCOPIC INSTRUMENTS

Abstract: Source: GB772432A 772,432. Gyroscopic compasses. SPERRY RAND CORPORATION. April 13, 1955 [May 25, 1954], No. 10642/55., Class 97(3) In a gyro compass comprising a rotorbearing frame containing a rotor and mounted with freedom of angular movement about a normally horizontal axis in a vertical ring, which is itself mounted with freedom of angular movement about a normally vertical axis in an instrument housing, the housing is completely filled with liquid, the rotor-bearing frame completely surrounds the rotor, has external symmetry, is liquid-tight and, together with the vertical ring, is completely immersed in the liquid, the densities of the rotor-bearing frame and the vertical ring being each substantially equal to the density of the liquid, whereby their weights are supported in neutral equilibrium by the buoyancy forces of the liquid. As shown in Fig. 1, a gyro compass of small size is housed in binnacle 10 comprising a main compartment 11 with a transparent cover 17. The card 18 of the compass element is visible through the cover 17 and is readable against a lubber line or mark 19. The hole of the binnacle 10 is filled with a liquid such as kerosene in which the operating parts of the instruments float. Liquid connection is made through a tube 22 to an expandable diaphragm 14. Electrical connections for the instrument are made through a socket 24. Rotor mounting. The rotor 27, Fig. 5, is driven by a squirrel cage induction motor having a stator 31 and a cage 32, and is mounted for rotation about a normally North-South axis 30 in a spherical casing 26 which is hermetically sealed and substantially evacuated. Liquid ballistic. The meridian seeking torque of the gyro compass is provided by a liquid ballistic comprising a pair of toroidal shaped tanks 34, 35 located within the liquid tight case 26, and connected by a tube 36 having a central portion 37 of reduced cross-sectional area. The top of the tanks 34, 35 are connected by a breather tube 38. The tanks 34, 35 'are half-filled with a liquid such as carbon tetrachloride the free-liquid surface area (which is maintained constant when the casing 26 tilts about its East-West axis by the toroidal shape of the tanks 34, 35) of which is designed to give approximately an 85 minute period for the gyro compass. Mounting of rotor casing. The casing 26 is mounted about normally horizontal ax's 41 in a gimbal ring 39, Fig. 1, which is in turn mounted about a normally vertical axis 40 in the binnacle 10. The weight of the components in the casing 26 is such that it just floats in the liquid in binnacle 10, so as to minimize friction in the bearings. Two of the three phase current windings for the rotor driving motor are lead into the gimbal through the lower bearing 46, while the third wire is lead in through the upper bearing 47. The wires are lead through the bearings of the rotor casing by means of brushes 109, 110, 111. An upper float tank 55 and a lower float tank 56 are connected to the gimbal ring 39 and are so designed that the floats and ring just float in the liquid contained in the binnacle 10. Both float chambers are symmetrical about the vertical axis 40, and the upper chamber 55 supports the compass card 18. Damping means. The damping means includes a compound pendulum located on the northerly disposed side of the case 26. As shown in Figs. 5 and 6, a first pendulum 62 is mounted for rotation about the North-South axis 30. The second pendulum 66 is mounted on the pendulum 61 to pivot about an axis 67. Pendulum 66 extends around the pendulum 62, and has a float chamber 72 containing a liquid in which moves a paddle 71 fixed to the pendulum 62. An impeller 80, driven through a magnetic coupling from the shaft of the rotor 27, draws in the surrounding floatation liquid and expels it through channel 79 in the pendulum 62. Channel 79 communicates with a channel 78, from which the liquid passes to channels 76, 77 in the pendulum 66. The liquid emerges from these channels in opposite direction, and the streams encounter blade 89, 90 mounted on the pendulum 62. When the East-West axis 41 of the compass is horizontal, the streams of liquid impinge equally on the vanes and no torque results. Should the casing tilt about the axis 41, one of the liquid streams is intercepted more by one vane and less by the other; so that a torque results which precesses the gyro to restore the axis 41 to the horizontal. Anti-swirl device.. If the instruments should turn in a uniform direction for a considerable time, the liquid in the binnacle 10 acquires a rotational movement which exerts a torque on the casing 26. To counteract this torque, a curved blade 91 is mounted 'below the pendulum 66, in such a manner that the movement of the liquid in the binnacle acting on the blade 91 moves the pendulum 66 to cover or uncover the channel 76, 77. The resultant torque opposes and counteracts the torque course by the swirling of the liquid. A mass 63, Fig; 5, is mounted at the south side of the casing 26 to counteract the weight of the pendulum 62, 66. Re-setting means. A re-setting.knob 94 is mounted on a shaft 95 extending through a mounting 96 set in the wall of the binnacle 10. Shaft 95 is rotatable, and is also movable axially between two positions defined by grooves 100, 101 engaged by a spring pressed ball 99. As shown, groove 100 is engaged by the ball 99, and the knob is in its inoperative position, inasmuch as a straight washer 105 and a curved washer 106 are clear of the float chamber 56. When the knob 94 is pressed forward so that the groove 101 is engaged by the ball 99, the curved washer 106 is pressed flat and through it the washer 105 engages a ring 102 formed on the rim of the float chamber 56. Freedom of movement about the vertical axis 40 is lost, and by turning the knob the position on the compass card 18 can be set as desired. If the rotor is spinning, this adjustment results in the tilt of the casing 26 about its axis 41. Tilt about axis 41 may be corrected by moving the knob into the intermediate position where ball 99 lies between the grooves 100, 101. In this position the ring 102 on float chamber 56 is engaged lightly by the curved washer 106. The loose frictional coupling allows torque to be applied which results in the levelling of the casing 26 about its axis 41. To assist in levelling, a number of liquid level devices, of which are indicated at 108, 101, are symmetrically arranged on the casing 26 and are observed through the transparent dome 17. Specification 772,433 is referred to.

Classifications:

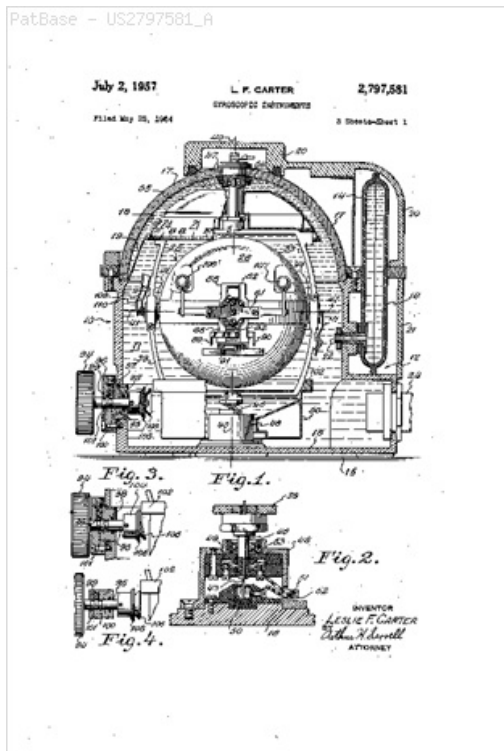
International (IPC 8-9): G01C19/38 (Advanced/Invention);
G01C19/00 (Core/Invention)

International (IPC 1-7): G01C19/38

CPC: Y10T74/12 Y10T74/1257 G01C19/38

European: G01C19/38

US: 33/327 74/5.5 74/5R

**Family:**

Publication number	Publication date	Application number	Application date
GB772432 A	19570410	GB19550010642	19550413
GB772433 A	19570410	GB19560023702	19550413
US2797581 A	19570702	US19540432193	19540525

Priority:

US19540432193 19540525

Probable Assignee:

SPERRY RAND CORP

Assignee(s): (std):

SPERRY RAND CORP

Inventor(s): (std):

CARTER LESLIE F

2) Family number: 1744961 (DE2840137A1)

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Title: PUMPEN-MOTOR-AGGREGAT, INSBESONDERE FÜR NORMPUMPEN-AGGREGATE MOTORISED STANDARD PUMP UNIT WITH MAGNETIC COUPLING - HAS CYLINDRICAL INNER AND OUTER COUPLING MEMBERS AROUND TUBULAR PUMP BEARING CARRIER

Abstract: Source: DE2840137A1 Pumpen-Motor-Aggregat, insbesondere für Normpumpen odggl Aggregate von kompakter, gegebenenfalls in Einzelabmessungen vorgegebener Bauweise, bei welchem die Pumpenwelle zumindest antriebsseitig eine Lagerung aufweist, dadurch gekennzeichnet, dass das Aggregat in an sich bekannter Weise zwischen der abgekapselten oder abzukapselnden Pumpe (1) und dem Pumpenantrieb eine Magnetkupplung (2) besitzt, bei der die Pumpen- sowie die Antriebswelle (8) bzw (18) jeweils mit durch einen Ringspalt (14) getrennten, koaxialen Magnetkupplungselementen (10, 10a) versehen sind, von denen sich das eine ausserhalb und das andere innerhalb des die Pumpe (1) antriebsseitig abkapselnden Spaltröhrtopfes (11) befindet, dass am antriebsseitigen Ende der Pumpe (1) ein Teil der Pumpenwelle (8) umschliessender, wenigstens ein Lager für diese Pumpenwelle (8) aufweisender, mit dem Pumpengehäuse (19) in Verbindung stehender, rohrartiger, innerer Lagerträger (20) vorgesehen ist, dass am antriebsseitigen Ende dieses Lagerträgers (20) ein auf der Pumpenwelle (8) drehfest sitzender Innenmagnet-Träger (13) derart angeordnet ist, dass seine Nabe (21) sich - in Achsrichtung der Pumpenwelle gesehen antriebsseitig zumindest nahezu unmittelbar am antriebsseitigen Ende des inneren Lagerträgers (20) anschliesst und der Zylindermantel (22) des Innenmagnet-Trägers (13) sich über einen Teil des inneren Lagerträgers (20) erstreckt, dass der Spaltröhrtopf (11) zumindest die vorderwähnten Pumpenantriebssteile (zB 8, 54, 55, 13 usw) abkapselnd umschliesst, und dass auf der Antriebswelle (18) ein mit seinem pumpenseitigen Bereich den Spaltröhrtopf (11) umgreifender Aussenmagnet-Träger (12) drehfest angeordnet ist. The motorised pump unit, partic. pump with standardised dimensions, has a pump shaft with bearing at the drive end and a magnetic coupling with co-axial outer and inner coupling bushes separated by a split sleeve in the annular gap between them. A bearing carrier surrounds the shaft and is connected to the pump housing. An inner magnet carrier has a hub fixed to the shaft near the drive end of the carrier and a cylindrical portion surrounding that carrier. The split sleeve encloses the drive assembly and is itself surrounded by an outer magnet carrier fixed to the motor output shaft.

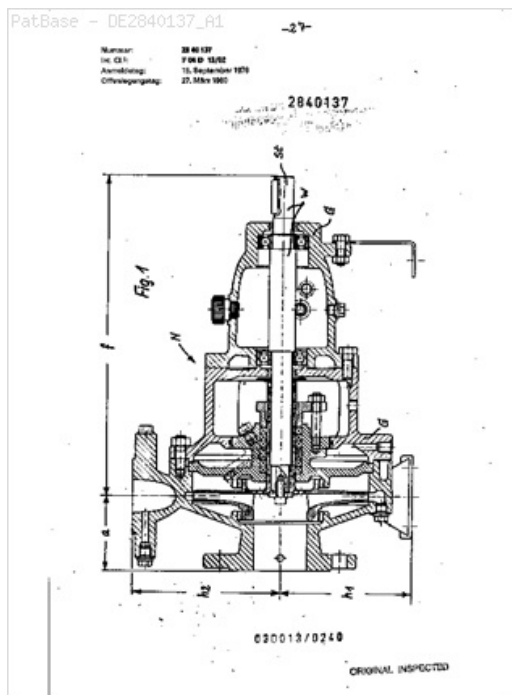
Classifications:

International (IPC 8-9): F04D13/02 (Advanced/Invention);
F04D13/02 (Core/Invention)

International (IPC 1-7): F04D13/02 F04D29/00

CPC: F04D13/027 F04D13/026

European: F04D13/02B3



Family:

Publication number	Publication date	Application number	Application date
DE2840137 A1	19800327	DE19782840137	19780915
DE2840137 C2	19860430	DE19782840137	19780915

Priority:

DE19782840137 19780915

Probable Assignee: LEDERLE PUMPEN UND MASCHF

Assignee(s): (std): LEDERLE PUMPEN UND MASCHF

Assignee(s): LEDERLE GMBH PUMPEN U MASCHF ; LEDERLE GMBH PUMPEN U MASCHF 7803 GUNDELFINGEN DE ; LEDERLE GMBH PUMPEN UND MASCHINENFABRIK ; LEDERLE GMBH PUMPEN UND MASCHINENFABRIK 7803 GUNDELFINGEN DE

Inventor(s): (std): KRAEMER R DR ; HAHN KARL HEINZ

Inventor(s): KRAEMER R ; HAHN KARL HEINZ 7800 FREIBURG DE ; HEINZ HAHN KARL ; KRAEMER R DR 7809 DENZLINGEN DE

3) Family number: 7786951 (US4209163A)

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Title: DUMP VALVE ASSEMBLY

Abstract: Source: US4209163A A dump valve assembly for opening and fluid-tightly sealing the drain outlet of a waste tank, the assembly comprising a rotatable elongated shaft having a handle at its upper end and a first or lower compression plate adjustably secured to its lower end. Disposed concentrically about the shaft are a first and second tubular member, the former having a length less than that of the shaft, and the latter having a length less than that of the first tubular member. Fixedly secured to the lower end of the first tubular member is a second or upper compression plate spaced from the lower plate. Sandwiched and pre-loaded between the upper and lower compression plates is a valve plug made of an expandable material. The shaft is provided with a double-thrust ball bearing which abuttingly engages the upper end of the first tubular member to permit independent rotation of the shaft relative to the former member. The threaded lower end of the shaft meshes with the inner threading of a hub formed integrally with the lower compression plate, in upright orientation relative thereto. Typically, the lower end portion of the shaft extends beyond the undersurface of the lower compression plate and a roll pin extends through the projecting lower shaft portion to retain the lower compression plate on the shaft during rotation of the latter. As a result of the pre-load of the plug, the lower compression plate will ride upwardly on the shaft threaded lower end thereby to expand the plug when the shaft is rotated in clockwise direction. Conversely, when the shaft is rotated in counterclockwise direction, the plug, on account of its expanded condition will urge the lower compression plate downwardly due to contraction of the plug to its normal size. The outer periphery of the plug is provided with a plurality of ribs which effect a positive seal with the drain outlet in expanded condition of the plug. The upper end of the first tubular member is formed with a narrow sleeve, the latter having a downwardly oriented finger which, during operation of the valve assembly, is received and accommodated in a downwardly extending, open-ended slot in the upper end of the second tubular member. This arrangement prevents rotation of the first tubular member relative to the second one. Secured to the second tubular member is a mounting plate for securing the assembly to the waste tank. Hence, during operation, both the first and second tubular members are stationary while rotation of the shaft causes expansion or contraction of the plug depending upon the rotation direction of the shaft.

Classifications:

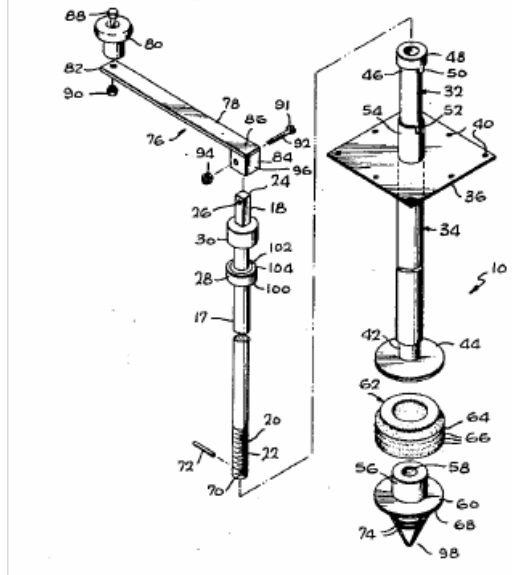
International (IPC 8-9): F16K27/07 F16K35/00 (Advanced/Invention); F16K27/00 F16K35/00 (Core/Invention)

International (IPC 1-7): F16K35/00

CPC: F16K27/07 F16K35/00 Y10T137/6881

European: F16K27/07 F16K35/00

US: 137/351 138/92 220/236 251/144 251/189 251/269 251/96

**Family:**

Publication number	Publication date	Application number	Application date
US4209163 A	19800624	US19780868813	19780112

Priority:

US19780868813 19780112

Probable Assignee: NORDSKOG ROBERT A**Assignee(s):** (std): NORDSKOG ROBERT A**Assignee(s):** NPI LIQUIDATION A CORP OF CA CORP ; NPI LIQUIDATION CORP ; NORDCO PRODUCTS INC ; NORDCO PRODUCTS INC A CORP OF CA**Inventor(s):** (std): NORDSKOG ROBERT A**4) Family number: 6438224 (SU889761T)**

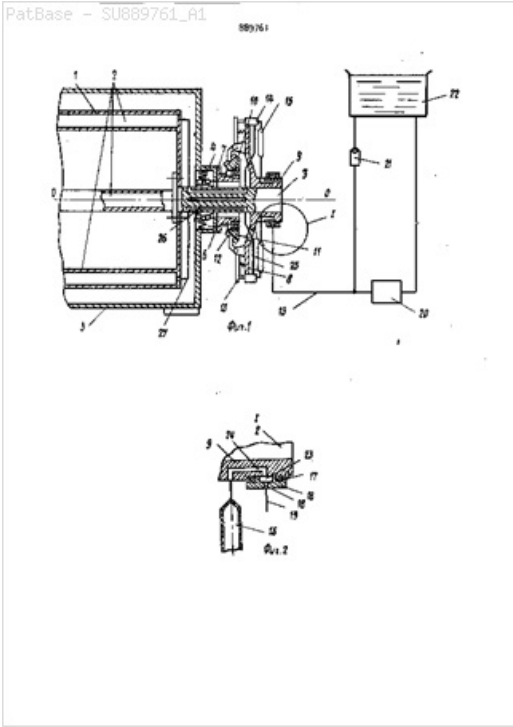
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Title: WASHING AND SQUEEZING MACHINE

Abstract: Source: SU889761T Invention relates to home appliances as well, namely to washer extractors. Known washer extractor, comprising two coaxial drum, the inner one of which you assembled on a horizontal shaft, installed in the floating bearing supports the movable roller and bearing on the end of the inner drum vibration sensor connected to the hydraulic control filling balancing pockets arranged on the outer surface of the inner drum and having a cage mounted in the bearing support fixed to the drive shaft to the hub, the channels having pivotally mounted on the end surface of the disc facing the ooyme two-armed lever, and controlling hydraulic balancing filling pockets is installed on the disk hub adapter body with channels, thus connected to channels disc hub and the disc rim arranged valves for feeding fluid into the corresponding pocket of the drum, the outlet of which are each associated with a respective passage through the nozzle disc hub. Dunn machine operates as follows. When the occurrence of horizontal oscillations of the inner drum shaft mounted on the bearing supports of the outer drum, the holder fixedly secured to the outer ring of the bearing arrangement and rotatable in synchronism with the internal drum, acts on the short arm of the bell crank. Its long lever arm acts on the valve. Fluid supplied under pressure through the adapter body is directed through the channel to the valve hub. well and further balancing in his pocket. This generated a pair of forces increasing up to complete equilibration unbalance amount unbalanced masses 3, whereupon the oscillation shaft and the inner drum disappear rovochnyh pockets located on the outer surface E of the inner wheel, kf mounted in a holder having a bearing support mounted on the shaft with the disc hub IME guide channels pivotally mounted on an end surface of the disc facing the holder of the bell crank and the hydraulic controlling the filling of the pockets has a balancing disk hub is mounted on adapter body with the channels thus connected channels disc hub and the rim is located ITATION disc valves for feeding fluid into the corresponding pocket of the drum, an outlet of each of which is associated with a respective passage through the nozzle disc hub, hydraulic control for balancing pockets overcrowding has a pressure fluid reservoir connected to the channels of the adapter through the pipeline, and each tube, binding inlet valve channel hub in the vertical section is made expandable, alternately sectional area of which exceeds the nozzle cross-sectional area. 4 connecting the outlet with the appropriate balancing pocket. FIG 1 shows the device general view; Figure 2 - node I in Figure 1; on fig.Z - hydraulic control filling the pockets of the inner wheel balancing machine. Washer extractor comprises two coaxial drums, inner one of which has a balancing pockets 2 and 3 horizontal shafts (left part of the machine is not shown) through which the inner drum 1 is mounted on a spring-loaded bearing assemblies 4 of the outer drum 5. To the end face 6 of the outer 5 drum attached a stepped sleeve 7, and to a horizontal shaft 3 1 inner drum drive hub 8 9. Stepped sleeve 7 and 8 disc hub 9 are the basic elements of the design of the sensor oscillation inner drum. Vibration sensor mounted on the bearing supports 10, the holder 11 with inclined slots 12, 13 of the bell crank, valves It, centrifugal capacity 15, 16 with transient coupling seals 1.7. Channel 18 of the adapter 16 is connected to line 19. Pump 20 through the check valve 21 is coupled to the hydraulic control filling balancer, tion pockets having the pressure vessel 22. Reducing coupling 16 has a channel 23, and the hub disc 3 8 channel 2k, which is connected with centrifugal capacity of 15. For samonagnetani balancing fluid in the pocket 2 the valve 14 is interconnected with the conduit 25, channels 27 and the conduit 2b. For explaining process samonagnetani balancing fluid into the pockets (in the case of failure of the pump) at fig.Z obozig-Cheno: $t \{ g(t, \text{the mass of fluid in the respective lines; } C, CQ, \text{the centrifugal forces of inertia of the respective masses; } UJ - \text{the angular velocity of rotation of the inner drum 1 and the structural elements of the sensor oscillation H fluid pressure generated by the pressure tank 23, where, } C, 7C \text{ and to yield the inequality } / H C LM / C, \text{ and this is provided samonagnetanie zhid5 bone balancing pockets 2 inner drum 1, washer extractor is as follows. During dynamic unbalance inner drum 1 and the occurrence of horizontal vibrations shaft 3 mounted on spring loaded bearing assemblies k, ferrule 11 acts on the short arm of the bell crank 13, which by its long plait Chom orifice opens the valve 1 when the power fluid pump 20 from the pressure tank 22 via the check valve 21 rio conduit 19 flows through the channel 18 into the internal channel 23 of the adapter 16.$

From the inner channel 23 through the channel 24 9 Kit liquid fills the container 15 and the centrifugal valve I. Afterwards the fluid through the conduit samonagnetanie 25t channel 26 and conduit 27 to the appropriate balancing pocket 2 inner drum 1. This fuse is Mr. washer extractor from an accident at high speed internal drum 1. sucking action system between seals 17 of the adapter 16, the corresponding vacuum. When included in the pump 20, check valve 21 closes the pressure vessel 22 and the system 15 centrifugal capacitances creates a vacuum between the sealing means 17, which allows to increase the flow rate distributed by the pump 20 at the same working pressure it. This allows to reduce the balancing time, the inner drum 1 washer extractor. Offers machine provides increased reliability, reduced time balancing and security service washer extractor having a high separation factor when spinning. CLAIMS 1 washer extractor comprising two coaxial drums, of which the inner is mounted on a horizontal shaft, installed in the floating bearing and the bearing supports of the drum at the end of the inner drum vibration sensor connected to the hydraulic control filling balancing pockets located on the outer inner drum poverhnosti and having a cage mounted in the bearing support fixed to the drive shaft to the hub, the channels having pivotally mounted on the end surface of the disc facing the holder of the bell crank and the hydraulic balancing control filling pockets is installed on the disk hub adapter body with channels, thus connected to channels disc hub and the disc rim arranged valves for feeding fluid into the corresponding pocket of the drum, the outlet of which are each associated with a respective passage through the nozzle disc hub, characterized in that in order to increase endowed (operation completely, filling the hydraulic control Pressure balancing pockets has a reservoir for liquid, connected to the channels of the adapter via the conduit, and each conduit, binding the valve inlet channel in the vertical portion of the hub is formed expandable, cross-sectional area which exceeds the cross sectional area of the nozzle, connecting the outlet with the corresponding balancing valve pocket. Sources infopmatsii received into account in the examination 1. USSR Author's Certificate on the application of W 2627679/28-12, cl. On D F 37/22, 1:) 78. 23 tT.V / A L 73

Classifications:
International (IPC 8-9): D06F37/22 (Advanced/Invention);
D06F37/20 (Core/Invention)
International (IPC 1-7): D06F37/22



Family:

Publication number	Publication date	Application number	Application date
SU889761 A1	19811215	SU19802892592	19800306
SU889761 T	19811215	SU19802892592	19800306

Priority:
SU19802892592 19800306

Probable Assignee: TS PK T B GLAVSANTEKHPROMA MIN

Assignee(s): (std): TS PK T B GLAVSANTEKHPROMA MIN

Assignee(s): TS PK T BYURO GLAVSANTEKHPROMA MINISTERSTVA PROMY ; TS PK T BYURO GLAVSANTEKHPROMA MINISTERSTVA PROMY STROITELNYKH MATERIALOV SSSR

Inventor(s): (std): MAKAROV ANATOLIJ P

Inventor(s): MAKAROV ANATOLIJ P SU

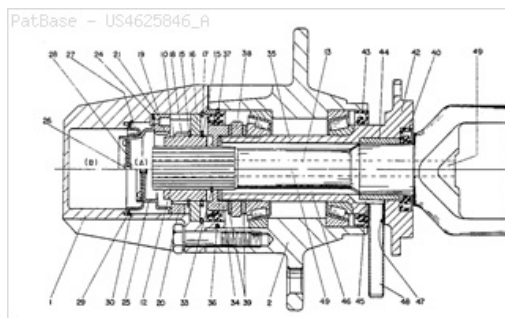
5) Family number: 29273634 (US4625846A) © PatBase

Title: DEVICE FOR DISCONNECTING THE WHEELS FROM A VEHICLE'S OPTIONAL DRIVE

Abstract: Source: US4625846A The automatic free wheeling hub assembly includes a housing or body secured to the vehicle's wheel hub. The vehicle's drive axle extends into and is mounted in the body and wheel hub. The free wheeling hub assembly includes a cylindrical axle hub located in the interior of the body and spline connected to the splined end of the drive axle. The axle hub is provided with an external toothed section or series of circumferentially spaced teeth. A tubular clutch ring is mounted in the body for axial movement and is provided with internal teeth for engagement with the disengagement from the series of teeth provided on the axle hub. Fluid actuating means are provided in the body including a movable member in the form of a diaphragm or piston connected to the clutch ring for axially moving same relative to said axle hub in response to the pressure or pressure differential from a fluid source such as vacuum to effect the engagement and disengagement of the matching teeth of the axle hub and clutch ring.

Classifications:
International (IPC 8-9): B60B35/18 B60B37/04 B60B37/10
B60K23/08 F16D25/061 F16D41/02 (Advanced/Invention);
B60K23/08 (Advanced/Non-invention);
B60B35/00 B60B37/00 B60K23/08 F16D25/06
F16D41/00 (Core/Invention)
International (IPC 1-7): B60B27/0 B60B27/00 B60B27/06
B60B37/00 B60K17/34 B60K23/06 B60K23/08 B60K23/8 F16D25/04

F16D25/061 F16D41/02 F16D43/28 F16H
CPC: Y10T403/10 B60B35/18 F16D25/061
European: B60B35/18 F16D25/061
US: 180/247 192/67R 192/69.41 192/85.11 192/85A 192/85V
 192/88A 403/1



Family:

Publication number	Publication date	Application number	Application date
AU198433670 A1	19850516	AU19840033670	19840928
AU562122 B2	19870528	AU19840033670	19840928
BRPI8305573 A	19850514	BR1983PI05573	19831010
DE3436293 A1	19850523	DE19843436293	19841003
ES536585 A1	19860201	ES19840536585	19841005
ES536585 A2	19860228	ES19840536585	19841005
ES8604452 A1	19860701	ES19840536585	19841005
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FR2553164 B1	19900504	FR19840015452	19841009
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GB2149028 B2	19861126	GB19840024112	19840924
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JP1680324 C3	19920713	JP19840210634	19841009
JP3044003 B4	19910704	JP19840210634	19841009
JP60151103 A2	19850809	JP19840210634	19841009
US4625846 A	19861202	US19840624537	19840625

Priority:

BR1983PI05573 19831010

Probable Assignee: AVM AUTO EQUIP

Assignee(s): (std): AVM AUTO EQUIP ; AVM AUTO EQUIPAMENTOS LIDA ; A BEE EMU AUTO EKIPIAMENTOSU LT

Assignee(s): A BEE EMU AUTO EKIPIAMENTOSU LTD ; AVM AUTO EQUIPAMENTOS LTD ; AVM AUTO EQUIPAMENTOS LTDA

Inventor(s): (std): GOMES MIGUEL ; GOMES MIQUEL ; GOMEZ MIGUEL ; MIGERU GOMESU ; MIGUEL GOMES ; MIGUEL GOMEZ

Agent(s): CALLINANS

6) Family number: 3160652 (US5190393A)

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Title: DEVICE AT EXPANDABLE MOUNTING SLEEVE

Abstract: Source: US5190393A PCT No. PCT/SE89/00296 Sec. 371 Date Jan. 7, 1991 Sec. 102(e) Date Jan. 7, 1991 PCT Filed May 25, 1989 PCT Pub. No. WO89/11598 PCT Pub. Date Nov. 30, 1989. The invention concerns expandable fastenings of the kind that includes a conical shaft part (2) and a conical expandable sleeve (4) that is pressed up on the conical part (2) of the shaft (1) in order to fill out and fasten the shaft in a mounting hole. The expandable sleeve (4) is pressed against the cone by a washer (5) and by a nut (11) screwed onto a threaded end portion of the shaft. The washer (5) is on its outside provided with a thread for the threading thereon of a nut part or sealing ring (6). The expandable sleeve (4) and the threaded washer (5) are connected by hooklike flanges so that the sealing ring (6) can also be used to pull out the sleeve from the conical axle part.

Classifications:

International (IPC 8-9): F16D1/06 F16D1/091 F16D1/097

F16J1/06 (Advanced/Invention);

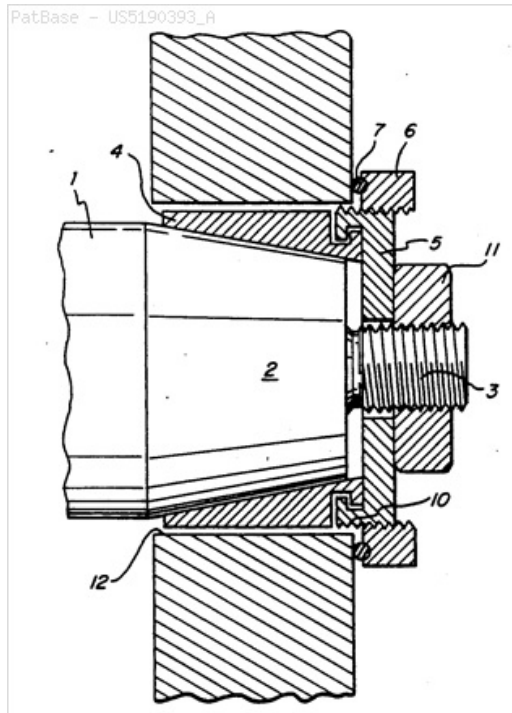
F16D1/06 F16J1/00 (Core/Invention)

International (IPC 1-7): F16B3/06 F16B7/04 F16D1/06 F16D1/09 F16J1/06

CPC: F16D1/097 Y10T403/1641 Y10T403/4682 Y10T403/7056

European: F16D1/097 F16D1/09C4B

US: 403/16 403/259 403/370

**Family:**

Publication number	Publication date	Application number	Application date
AT95591 E	19931015	AT19890906845T	19890525
AU198937608 A1	19891212	AU19890037608	19890525
AU634713 B2	19930304	AU19890037608	19890525
DE68909786 D1	19931111	DE19896009786	19890525
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EP0417182 A1	19910320	EP19890906845	19890525
EP0417182 B1	19931006	EP19890906845	19890525
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SE463225 B	19901022	SE19880001942	19880525
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SE8801942 A	19891126	SE19880001942	19880525
SE8801942 A0	19880525	SE19880001942	19880525
SE8801942 L	19891126	SE19880001942	19880525
US5190393 A	19930302	US19910613555	19910107
WO8911598 A1	19891130	WO1989SE00296	19890525

Priority:

EP19890906845 19890525 SE19880001942 19880525 WO1989SE00296 19890525
 US19910613555 19910107

Probable Assignee: SVENSSON ROGER

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Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD

Designated states: AT AU BE BR CH DE FI FR GB IT JP LI LU NL SE SU US

7) Family number: 3388809 (US5033327A)

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Title: CAMSHAFT PHASING DRIVE WITH WEDGE ACTUATORS

Abstract: Source: US5033327A A phase adjuster for engine camshafts and the like includes in a preferred embodiment a sprocket driving a camshaft attached hub through paired wedge packs that transfer torque and maintain a lash free connection. A plunger actuated by engine oil pressure and coating drive springs axially move alternate active wedges to oppositely vary the arcuate lengths of the wedge packs and thereby change the phase angle between the sprocket and camshaft. A three way valve shuts off pressure oil flow except when needed to advance the plunger, thus minimizing oil flow requirements.

Classifications:

International (IPC 8-9): F01L1/04 F01L1/34 F01L1/344

F16D3/10 (Advanced/Invention);

F01L1/34 (Advanced/Non-invention);

F01L1/34 F01L1/344 F16D3/02 (Core/Invention)

International (IPC 1-7): F01L1/04 F01L1/34 F16D3/10 F16H25/00

F16H53/00

CPC: F01L1/34406 Y10T74/2101 Y10T74/2102 F16D3/10 F01L1/344

F02B2275/18

European: F01L1/344 F01L1/344A1 F16D3/10 R02B275/18

US: 123/90.17 123/90.31 464/2 74/567 74/568R

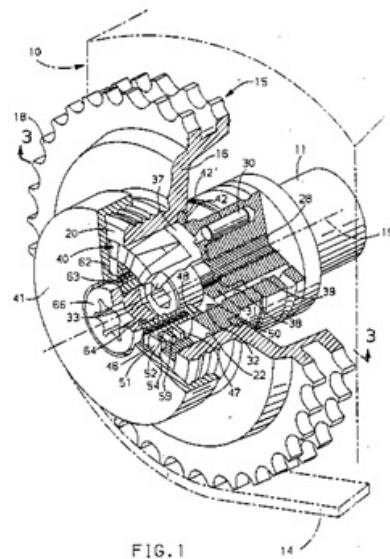


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
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AU610784 B1	19910523	AU19900063935	19901009
AU614469 B2	19910829	AU19900063936	19901009
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BRPI9005041 A	19910910	BR1990PI05041	19901009
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CA2025058 C	19950103	CA19902025058	19900911
CA2025059 AA	19910411	CA19902025059	19900911
CA2025059 C	19940517	CA19902025059	19900911
DE69000826 D1	19930311	DE19906000826	19900925
DE69000826 T2	19930519	DE19906000826T	19900925
DE69005776 D1	19940217	DE19906005776	19900925
DE69005776 T2	19940511	DE19906005776T	19900925
EP0422791 A1	19910417	EP19900310453	19900925
EP0422791 B1	19940105	EP19900310453	19900925
EP0422792 A1	19910417	EP19900310454	19900925
EP0422792 B1	19930127	EP19900310454	19900925
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JP1961021 C3	19950810	JP19900273130	19901011
JP3134209 A2	19910607	JP19900273130	19901011
JP3134210 A2	19910607	JP19900273129	19901011
JP6089658 B4	19941109	JP19900273129	19901011
JP6094803 B4	19941124	JP19900273130	19901011
US5033327 A	19910723	US19890418018	19891010
US5119691 A	19920609	US19900559243	19900727
US5163872 A	19921117	US19910758441	19910905

Priority:

CA19902025058 19900911	CA19902025059 19900911	US19900559243 19900727
US19910758441 19910905	US19890418018 19891010	US19890418019 19891010

Probable Assignee: GEN MOTORS CORP**Assignee(s):** (std): GEN MOTORS CORP

Assignee(s): GENERAL MOTORS A CORP OF DE CORP ; GENERAL MOTORS CORP ; GENERAL MOTORS CORP DETROIT MICH US ; KOVACEVICH KENNETH A ; LICHTI THOMAS H ; WAYDELIS RONALD A ; NIEMIEC MICHEL J ; SHOST MARK A ; MCCARROLL MICHAEL E ; NIEMIEC MICHAEL J ; ELPHICK THOMAS G

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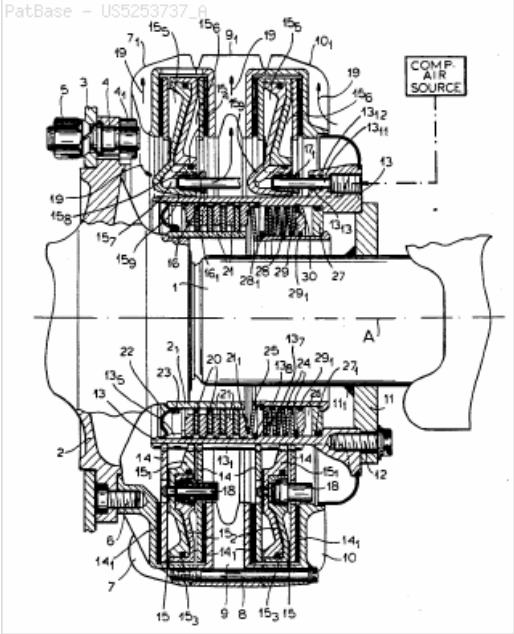
8) Family number: 11320659 (US5253737A)

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Title: Auxiliary brake force multiplying spring in a multidisc service and auxiliary brake system

Abstract: Source: US5253737A A full lining operating brake for a heavy duty vehicle is also provided with a parking or auxiliary brake in the form of a heat storing stack of brake plates within the brake carrier of the operating brake and between the carrier and a sleeve connected to the hub upon which the wheel is mounted. A belleville washer spring stack acts upon the stack of plates through a force multiplier disk and is itself relieved to permit the wheel to rotate by the pneumatic displacement of a tube which draws the spring stack away from the brake plate stack.

Classifications:
International (IPC 8-9): B60T1/06 F16D55/38 (Advanced/Invention); B60T1/00 F16D55/24 (Core/Invention)
International (IPC 1-7): B60T8/32 F16D55/24
CPC: B60T1/065 F16D55/38
European: B60T1/06C F16D55/38
US: 188/170 188/71.5 188/71.8 188/715 188/718 188/72.3 188/723 192/111.1 192/111A 192/48.611 192/85.41 192/85AB



Family:

Publication number	Publication date	Application number	Application date
US5253737 A	19931019	US19910798284	19911125

Priority:

US19910798284 19911125

Probable Assignee: DAETWYLER AG
Assignee(s): (std): DAETWYLER AG
Assignee(s): DATWYLER AG
Inventor(s): (std): KLAUE HERMANN

9) Family number: 30115635 (US2001001122A)

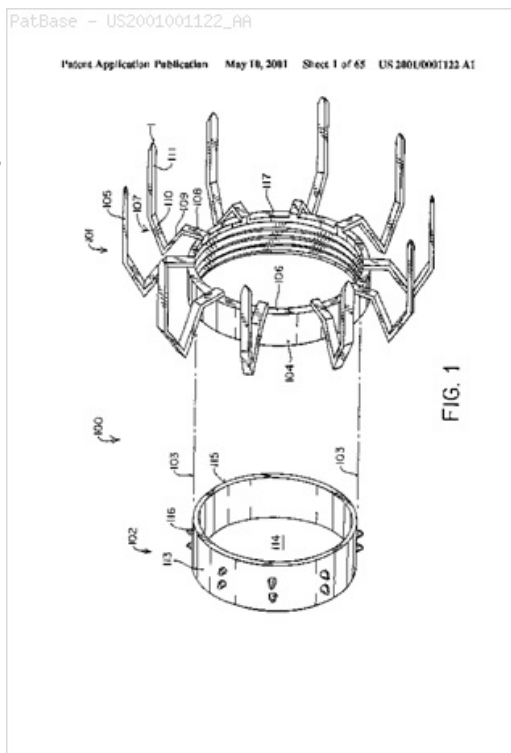
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Title: Devices and methods for performing a vascular anastomosis

Abstract: Source: US2001001122A A system for performing an end-to-side vascular anastomosis, including an anastomosis device, an application instrument and methods for performing a vascular anastomosis. The system is applicable for performing an anastomosis between a vascular graft and the ascending aorta in coronary artery bypass surgery, particularly in port-access CABG surgery. A first aspect of the invention includes a vascular anastomosis staple. A first configuration has two parts: an anchor member, forming the attachment with the target vessel wall and a coupling member, forming the attachment with the bypass graft vessel. The anastomosis is completed by inserting the coupling member, with the graft vessel attached, into the anchor member. A second configuration combines the functions of the anchor member and the coupling member into a one-piece anastomosis staple. A second aspect of the invention includes an anastomotic fitting having an inner flange over which the graft vessel is everted and an outer flange which contacts the exterior surface of the target vessel. A tailored amount of compression applied by the inner and outer flanges grips the target vessel wall and creates a leak-proof seal between the graft vessel and the target vessel. A third aspect of the invention has a flange to which the graft vessel attaches, by everting the graft vessel over the flange, and a plurality of staple-like members which attach the flange and the everted end of the graft vessel to the wall of the target vessel to form the anastomosis.

Classifications:
International (IPC 8-9): A61B17/00 A61B17/02 A61B17/04 A61B17/064 A61B17/068 A61B17/08 A61B17/11 A61B17/115 A61B17/12 A61F2/00 (Advanced/Invention); A61B17/00 A61B17/02 A61B17/064 A61B17/11 A61B17/115 A61B17/12 A61F2/00 (Advanced/Non-invention); A61B17/03 A61B17/064 A61B17/068 (Core/Invention); A61B17/00 A61B17/12 A61F2/00 (Core/Non-invention)
International (IPC 1-7): A61B17/00 A61B17/04 A61B17/064 A61B17/08 A61B17/10 A61B17/11 A61B17/115 A61B17/32 A61F2/06
CPC: A61B17/064 A61B17/0643 A61B17/068 A61B17/11 A61B17/115 A61B17/12036 A61B17/12045 A61B17/12109 A61B17/12136 A61B2017/00243 A61B2017/0641 A61B2017/0647 A61B2017/1103 A61B2017/1107 A61B2017/1135 A61B2017/12127 A61F2002/30092 A61F2210/0014 A61B17/0206 A61B17/1152 A61B17/12131 A61B2017/00557 A61B2017/00703

European: A61B17/064 A61B17/068 A61B17/11 A61B17/115 A61B17/12P1P A61B17/12P1T2 A61B17/12P5B A61B17/12P7 A61B17/12P7B K61B17/00E1C K61B17/00N8 K61B17/00Q4H K61B17/02A K61B17/064A K61B17/064C K61B17/064T K61B17/11 K61B17/115 K61B17/115B K61B17/11A K61B17/11B K61B17/11P K61B17/12P6 K61F2/30A1W20 K61F210/00D
US: 128/898 227/179.1 227/180.1 600/210 600/215 600/219 600/235 606/1 606/104 606/139 606/142 606/143 606/151 606/151P 606/151S 606/153 606/153P 606/153S 606/155 606/155P 606/155S 606/156 606/184 606/191 606/194 606/198 606/213 606/219 606/219S 606/232



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Publication number	Publication date	Application number	Application date
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EP1266628 B1	20081105	EP20020018253	19960213
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WO9802099 A1	19980122	WO1997US12402	19970716

Priority:

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Probable Assignee: HEARTPORT INC

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

10) Family number: 30089054 (US2002019280A)

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Title: CONTINUOUSLY VARIABLE TRANSMISSION AND METHOD OF TRANSFERRING LOADS IN THE SAME

Abstract: Source: US2002019280A Various configurations of a continuously variable transmission include a drive pulley, a driven pulley and a belt extending therebetween. The drive pulley is generally comprised of a moveable sheave half and a fixed sheave half. The moveable sheave half is freely rotatable relative to the drive shaft and the fixed sheave half. Torque is transferred between the moveable sheave half and the stationary sheave half through the use of a roller bearing and channel race arrangement; however, the roller bearings are freely translatable within the channel races. The continuously variable transmission also features a differential positioned between the two output pulleys and an articulating member positioned between the two input pulleys. These two members operate together to eliminate bucking of the belts caused by differences in driven speeds of the two driven pulleys in a parallel configuration of the variable speed transmission. Additionally, a method of assembling the transmission is also described.

Classifications:

International (IPC 8-9): F16H37/08 F16H55/56 F16H61/662

F16H63/08 F16H9/16 F16H9/18 (Advanced/Invention);

F16H61/662 F16H63/08 (Advanced/Non-invention);

F16H37/06 F16H55/32 F16H9/02 (Core/Invention);

F16H61/66 (Core/Non-invention)

International (IPC 1-7): B21D39/03 B23P11/00 B23P19/04

F16H37/02 F16H37/08 F16H55/56 F16H63/00 F16H63/02 F16H63/08

F16H9/00 F16H9/16 F16H9/18 F16H9/20

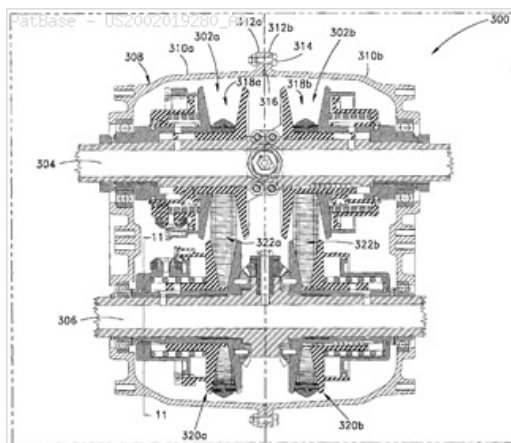
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European: F16H37/08 F16H37/08C1B F16H55/56 F16H9/16

R16H61/662P R16H9/16P

US: 269/21 29/428 29/428S 29/434 29/DIG.44 474/14 474/18
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474/8 474/8S 475/198 475/198S 475/210 475/210P



Family:

Publication number	Publication date	Application number	Application date
AU199961436 A1	20000403	AU19990061436	19990914
AU199961436 A5	20000403	AU19990061436	19990914
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US2002019280 AA	20020214	US19990453354	19991201
US2003004022 AA	20030102	US20020119530	20020409
US2003153426 AA	20030814	US20020281895	20021025
US6398679 BA	20020604	US19990395467	19990914
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US6926632 BB	20050809	US20020281895	20021025
WO0015977 A2	20000323	WO1999US21059	19990914
WO0015977 A3	20000713	WO1999US21059	19990914
WO0015977 C2	20010621	WO1999US21059	19990914

Priority:

US19980100220P 19980914 US19990395467 19990914 US19990453354 19991201
US20010343395P 20011220 WO1999US21059 19990914 US20020119530 20020409
US20020281895 20021025 US20010343955P 20011025

Probable Assignee: BROWN ALBERT W

Assignee(s): (std): A W BROWN CO INC ; BROWN ALBERT W ; KNOBBE MARTENS OLSON AND BEAR LL

Assignee(s): KNOBBE MARTENS OLSON AND BEAR LLP ; AW BROWN CO ; AW BROWN CO INC ; A W BROWN CO

Inventor(s): (std): ALBERT W BROWN ; BROWN ALBERT W

Agent(s): KNOBBE MARTENS OLSON AND BEAR LLP

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

11) Family number: 30381278 (US2002027053A)

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Title: TORQUE TRANSMITTING APPARATUS

Abstract: Source: US2002027053A A hydrokinetic torque converter with a built-in bypass clutch is provided with an arrangement which regulates the cooling of the clutch at a rate dependent upon the slip between the coaxial driving and driven parts of the clutch, and hence upon the quantity of generated friction heat. The cooling unit for the driving and/or driven part of the clutch can employ, for example, one or more pumps; a supply of a substance which changes its aggregate state from liquid to gaseous or from solid to flowable in response to heating, and vice versa in response to cooling; one or more porous washers in the path for the flow of hydraulic fluid between the customary plenum chambers provided in the housing of the torque converter to move a piston of the driven part of the clutch into and from frictional engagement with the housing; and/or a system of recesses, grooves, channels and/or other passages serving to convey fluid between the chambers at a rate which is higher or highest when the clutch operates with maximum slip. Such rate can decrease to zero when the torque converter is idle or the clutch is fully engaged to operate without slip.

Classifications:

International (IPC 8-9): F16D13/72 F16H45/02

F16H61/14 (Advanced/Invention);

F16H41/00 (Advanced/Non-invention)

International (IPC 1-7): F16D13/72 F16D33/00 F16D35/00

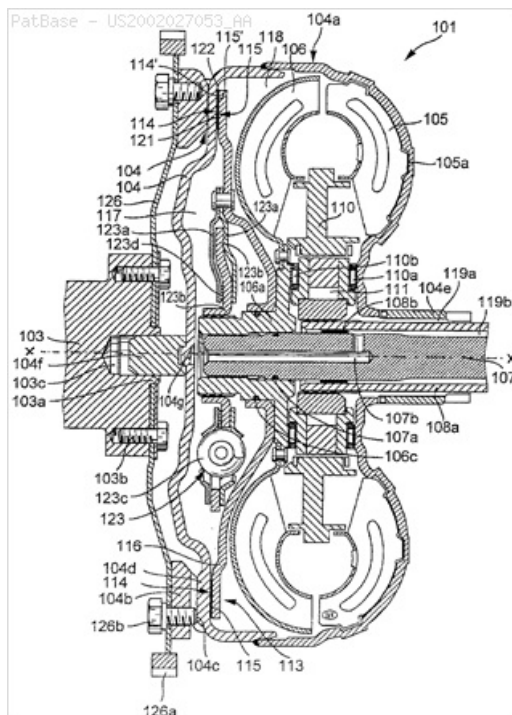
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F16H2045/0294

European: F16H45/02 R16H45/02B R16H45/02W2 R16H45/02W6
R16H45/02X

US: 192/113.34 192/113.340S 192/113.35 192/113.350S 192/113.36
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Family:

Publication number	Publication date	Application number	Application date
DE10117746 A1	20011122	DE20011017746	20010409
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Priority:

DE20001020907 20000428	DE20011017746 20010409	US20040996333 20041123
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Probable Assignee: LUK LAMELLEN AND KUPPLUNGSBAU

Assignee(s): (std): LUK LAMELLEN AND KUPPLUNGSBAU ; SCHAEFFLER TECHNOLOGIES AG

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Inventor(s): WOLFGANG REIK ; STEPHAN MAIENSCHIN ; BRUNO MULLER ; GUNNAR BACK ; PAUL GRANDERATH ; JEAN FRANCOIS HELLER ; MARC MEISNER ; HUBERT FRIEDMANN

Agent(s): CABINET REGIMBEAU; DARBY AND DARBY PC; DARBY AND DARBY

12) Family number: 28292471 (US2002035400A)

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Title: IMPLANTABLE JOINT PROSTHESIS

Abstract: Source: US2002035400A The invention relates to a surgical implant that provides an artificial diarthroidal-like joint, suitable for use in replacing any joint, but particularly suitable for use as an intervertebral disc endoprosthesis. The invention contains two rigid opposing shells, each having an outer surface adapted to engage the surfaces of the bones of a joint in such a way that the shells are immobilized by friction between their outer surfaces and the surfaces of the bone. These outer surfaces are sufficiently rough that large frictional forces strongly resist any slippage between the outer surface and the bone surfaces in the joint. They may be convex, and when inserted into a milled concavity, are immediately mechanically stable. Desirably, the outer surfaces of the shells are adapted to allow for bony ingrowth, which further stabilizes the shells in place. The inner surfaces of the shells are relatively smooth, and adapted to slide easily across a portion of the outer surface of a central body disposed between the shells. The central body has a shape that cooperates with the shape of the inner surface of the shell so as to provide a range of motion similar to that provided by a healthy joint. A flexible sheath extends between edges of the opposing shells. The inner surface of this sheath, together with the inner surfaces of the rigid shells, defines a cavity encasing the central body. At least a portion of this cavity is filled with a fluid lubricant, further decreasing the frictional force between inner surfaces of the shell and the surface of the central body.

Classifications:

International (IPC 8-9): A61B1/32 A61B17/00 A61B17/02 A61B17/16 A61B17/17 A61B17/56 A61B17/66 A61B17/88 A61B19/00 A61B19/02 A61B5/055 A61B5/107 A61B6/04 A61B8/13 A61F2/00 A61F2/28 A61F2/30 A61F2/44 A61F2/46 B25B13/00

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A61B17/02 A61B17/16 A61B19/00 A61F2/00 A61F2/28 A61F2/30
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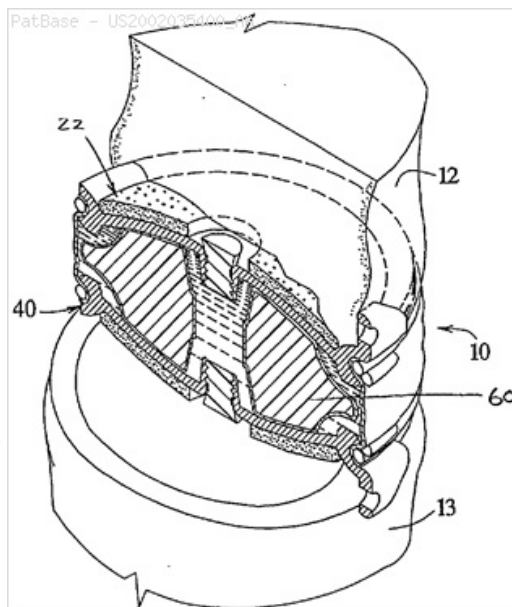
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European: A61B17/02 A61B17/02R A61B17/16S4 A61B17/17S4
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Priority:

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Assignee(s): BROMAN RICHARD J ; SDGI HOLDINGS INC D B A MEDTRONIC SOFAMOR DANEK I ; SDGI HOLDINGS INC D B A MEDTRONIC SOFAMOR DANEK INC ; TOKISH LEONARD JR ; YAGER DAVID ; MEDTRONIC SOFAMOR DANEK INC ; CONTA BOBERT

Inventor(s): (std): BROMAN RICHARD ; BROMAN RICHARD J ; BROWMAN RICHARD J ; BROWMAN RICK ; BRYAN VINCENT ; CLARK CHARLES R ; CONTA BOB ; CONTA BOBERT ; CONTA ROBERT ; EDFAST JEFF ; FINAZZO ANTHONY ; FINAZZO TONY ; GIL CARLOS ; GIL CARLOS E ; KELLY AARON ; KUNZLER ALEX ; MARSHALL ELLIOTT ; ROULEAU JEFF ; ROULEAU JEFFREY ; ROULEAU JEFFREY P ; YAGER DAVID ; YAGER DAVE ; YAGER DAVID ; YAGER DAVID J ; TOKISH JR LEONARD ; TOKISH LEN ; TOKISH LENONARD JR ; TOKISH LEONARD ; TOKISH LEONARD JR ; ALLARD RANDY

Inventor(s): BOB CONTA ; ALEX KUNZLER ; VINCENT BRYAN ; TONY FINAZZO ; RICK BROWMAN ; RANDY ALLARD ; ELLIOTT MARSHALL ; LEN TOKISH ; CARLOS GIL ; TOKISH ; ROBERT CONTA ; JEFF ROULEAU ; JR LEONARD

Agent(s): CALLINANS ; FISHER ADAMS KELLY CALLINANS ; FB RICE ; FB RICE PTY LTD ; GOWLING LAFLEUR HENDERSON LLP ; FROST ALEX JOHN ; KOBAYASHI YASUSHI ; CHIBA AKIO ; SAKUMA SHIGERU ; MASUI CHUJI ; KANDA FUJIHIRO ; ONO SHINJIRO ; HASHIMOTO MASAO ; TAKEUCHI SHIGEO ; SHAMOTO ICHIO ; TOMITA HIROYUKI ; UCHIDA HIROSHI ; ITO TAKAMI ; HAYNES AND BOONE LLP ; MEDTRONIC,ATTN: NOREEN JOHNSON - IP LEGAL DEPARTMENT ; MEDTRONIC ATTN NOREEN JOHNSON IP LEGAL DEPARTMENT

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

13) Family number: 30396775 (US2003000012A)

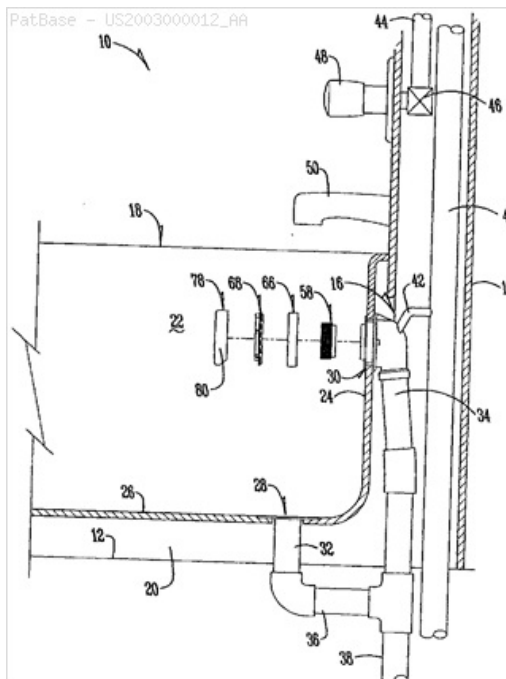
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Title: OVERFLOW ASSEMBLY FOR BATHTUBS AND THE LIKE

Abstract: Source: US2003000012A An overflow system in the bathtub has an overflow port and has a drain pipe in connection with the overflow port. A threaded flange has a stub shoulder on one end which is forced-fitted into a circular sleeve on the overflow port. The threaded flange has exterior threads on its outer surface and a thin diaphragm secured to the end thereof opposite to the stub shoulder. A large sealing washer embraces the outside of the circular flange on the overflow port and extends partially over the threads of the threaded flange. A large internally threaded nut is threadably mounted on the outer end of the threaded flange and compresses the sealing washer against a vertical flange on the port to seal the connection between the threaded flange and the port. A decorative cap is frictionally snapped into engagement with protrusions on the outer surface of the nut. The cap can be removed when needed to permit the plumber to gain access to the diaphragm to cut it open for fluid flow after they system has been tested for leaks, or put in place after the cut takes place.

Classifications:

International (IPC 8-9): A47K1/00 A47K1/04 A47K1/14 A47K3/02 B25B13/48 E03C1/20 E03C1/22 E03C1/23 E03C1/232 E03C1/24 E03C1/244 E03C1/26 E03C1/262 E03D1/22 E03F3/04 F16L11/00 F16L5/06 F16L55/10 F16L55/115 (Advanced/Invention); C02F1/00 (Advanced/Non-invention); A47K1/00 A47K3/02 B25B13/00 E03C1/00 E03C1/12 E03C1/20 E03C1/22 E03C1/26 E03F3/04 F16L11/00 (Core/Invention)
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Family:

Publication number	Publication date	Application number	Application date
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Assignee(s): PILARCZYK ERIC ; WCM INDUSTRIES INC ; WCM IND

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Agent(s): RIDOUT AND MAYBEE LLP; RICHES MCKENZIE AND HERBERT LLP; ZARLEY LAW FIRM PLC; SHERIDAN ROSS PC; SHERIDAN

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

14) Family number: 30668140 (US2004118939A)

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Title: VEHICLE WINDSHIELD CLEANING SYSTEM

Abstract: Source: US2004118939A Apparatus and method for providing a heated cleaning fluid to a vehicle surface. The apparatus has an inlet port for receiving an amount of fluid; an outlet port for dispensing an amount of heated fluid; a heating element that heats up fluid passing from the inlet to the outlet; and a control circuit for energizing at least a portion of the heating element with a voltage to heat the fluid passing from the inlet to the outlet.

Classifications:

International (IPC 8-9): B05B1/10 B05B1/24 B05B12/10 B05B17/04 B05B9/00 B60L1/02 B60S1/02 B60S1/46 B60S1/48 B60S1/50 B60S1/52 B67D7/80 F16L53/00 F24H1/00 F24H1/10 F24H1/12 F24H1/14 F24H1/16 F24H1/18 F24H1/20 F28D1/06 G05D23/00 H05B1/02 H05B3/40 (Advanced/Invention); B05B1/00 B05B1/02 B05B12/08 B05B17/04 B05B9/00 B60L1/00 B60S1/02 B60S1/46 B67D7/80 F24H1/00 F24H1/10 F24H1/18 F24H1/20 H05B3/40 (Core/Invention)

International (IPC 1-7): B05B1/10 B05B1/24 B05B17/04 B60S1/46 B67D5/62

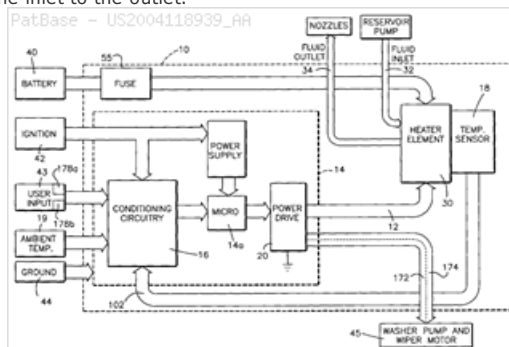
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European: B05B12/10 B05B9/00A B60S1/48B2 B60S1/48D B60S1/48D2 B60S1/50 F24H1/10B2D F24H1/18H F24H1/20B2 F28D1/06 F28D7/02D F28F9/26

US: 1/1 134/58.00RS 134/58R 137/340 15/250.01 15/250.010P 15/250.02 15/250.05 15/250.050P 15/250.050S 165/132 165/202 165/287 218/202 219/202 219/494 219/494S 222/146.2 222/146.200P 222/146.5 239/128 239/13 239/130 239/130P 239/130S 239/135 239/135P 239/135S 239/13P 239/13S 239/284.1 239/284.100P 239/284.100S 239/284.2 239/284.200S 392/450 392/451 392/461 392/465 392/466 392/478 392/480 392/481 392/482 392/485 392/485S 392/488

Family:

Publication number	Publication date	Application number	Application date
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Priority:

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC 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 PE PG PH PL PT RO RS RU 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 YU ZA ZM ZW

15) Family number: 30871866 (US2004168734A)

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Title: PIPE FITTING PLUG

Abstract: Source: US2004168734A A reusable pipe fitting plug for temporarily sealing the open hub on a non-threaded female pipe fitting. The pipe fitting plug has a retainer with piercing edges, expandable pins or grit type particles designed to engage the inner portion of a pipe fitting hub in order to anchor the pipe fitting plug. The pipe fitting plug further has an expandable rubber seal or expandable rubber bladder designed to provide a watertight seal.

Classifications:

International (IPC 8-9): F16L55/10 F16L55/115 (Advanced/Invention); F16L55/10 (Core/Invention)

International (IPC 1-7): F16L55/10

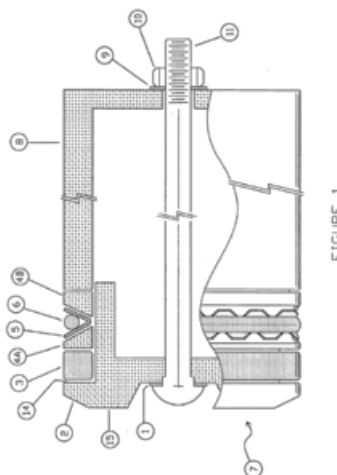
CPC: F16L55/132 F16L55/136

European: F16L55/132 F16L55/136

US: 138/89 138/90 138/93

PatBase - US2004168734_AA

Patent Application Publication Sep. 2, 2004 Sheet 1 of 7 US 2004/0168734 A1



Family:

Publication number	Publication date	Application number	Application date
US2004168734 AA	20040902	US20030734471	20031212
US7171987 BB	20070206	US20030734471	20031212

Priority:

Probable Assignee: SERRET RAYMOND J
Assignee(s): (std): SERRET RAYMOND J
Inventor(s): (std): SERRET RAYMOND J
Agent(s): LUCAS AND MERCANTI

16) Family number: 31495152 (US2005022883A)

© PatBase

Title: FUEL CARTRIDGE WITH CONNECTING VALVE

Abstract: Source: US2005022883A A shut-off valve or connecting valve capable of connecting a fuel supply to a fuel cell is disclosed. The valve comprises a first valve component and a second valve component. Each valve component has an outer housing and a biased slidable member disposed inside the housing forming an internal seal. During the connection process, the two valve components establish an inter-component seal. Afterward, in one suitable embodiment the slidable member moves inward and opens the internal seal in the valve component to establish a flow path. In another embodiment, the slidable member moves inward and exposes a first filler and the first filler abuts a second filler in the other valve component to establish a flow path. In other embodiments, at least one valve component is sized and dimensioned to limit access to the internal seal.

Classifications:

International (IPC 8-9): B01J19/00 B01J4/02 B01J7/00 B01J7/02 B01J8/00 B01J8/02 B01J8/08 B23P19/10 B65B1/04 B65D25/42 B67D7/06 C01B3/00 C01B3/02 C01B3/06 C01B3/08 C01B3/32 C01B3/36 C01B6/00 C10B1/04 C10J1/207 C10J3/06 C10J3/20 C10J3/46 C10J3/54 C10J3/68 E03B1/00 F15D1/00 F16J15/06 F16K1/00 F16K15/00 F16K15/02 F16K15/04 F16K15/06 F16K15/14 F16K17/02 F16K17/04 F16K17/22 F16K17/30 F16K23/00 F16K31/126 F16K31/44 F16K47/02 F16K51/00 F16K7/00 F16K7/17 F16L29/00 F16L29/04 F16L37/00 F16L37/28 F16L37/30 F16L37/32 F16L37/33 F16L37/34 F16L37/36 F16N5/02 F17C11/00 G05D16/00 G05D16/04 G05D16/06 G05D16/08 G05D7/00 H01M2/00 H01M2/06 H01M2/08 H01M2/12 H01M2/14 H01M8/00 H01M8/02 H01M8/04 H01M8/06 H01M8/10 H01M8/18 H01M8/22 (Advanced/Invention); B01J7/02 B01J8/00 B01J8/08 B65B1/04 C01B3/06 C01B3/32 F01L3/08 F16K15/00 F16K15/06 F16K47/02 F16K51/00 F16L29/04 F16L37/34 F17C11/00 H01M8/04 H01M8/06 H01M8/08 H01M8/10 (Advanced/Non-invention); B01J19/00 B01J7/00 B01J8/00 B65B1/04 B65D25/38 C01B3/00 C10B1/00 C10J3/02 C10J3/46 E03B1/00 F16K15/00 F16K15/02 F16K15/14 F16K17/02 F16K23/00 F16K47/00 F16K51/00 F16K7/00 F16L29/00 F16L37/28 F16L37/34 H01M2/00 H01M2/08 H01M2/12 H01M2/14 H01M8/00 H01M8/04 H01M8/06 H01M8/10 (Core/Invention); B01J8/00 C01B3/00 H01M8/10 (Core/Non-invention); C10J E03B F16L H01M (Subclass/Invention)

International (IPC 1-7): B01J7/00 C01B3/06 E03B1/00 F16L29/04 F16L37/28 F16L37/3 F16L37/32 F16L37/33 F16L37/34 F16L37/36 H01M H01M2/00 H01M2/06 H01M8/02 H01M8/04 H01M8/22

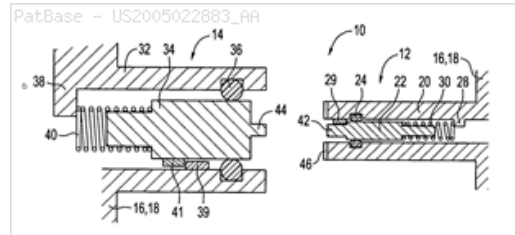
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European: B01J4/02 B01J7/02 B01J8/08D C01B3/06C C01B3/32 C01B3/34 F16K15/06C F16L19/025 F16L35/00 F16L37/32 F16L37/33 F16L37/34 F16L37/36 H01M8/04C2 H01M8/04C6 H01M8/04C6B H01M8/06B H01M8/06B4 L01J208/00C4 M01B203/02 M01B203/02B4B M01B203/06H M01B203/06H2 R16L201/20 T01M8/04C4 T01M8/04C6D T01M8/08A T01M8/10C T01M8/10C2 Y02E20/18 Y02E60/36 Y02E60/36B Y02E60/50

US: 1/1 137/511 137/527 137/527S 137/528 137/528S 137/550 137/613 137/613S 137/614.03 137/614.030P 137/614.030S 137/614.04 137/614.040P 137/614.040S 137/614.05 137/614.2 137/630.14 137/844 137/846 137/846S 137/859 141/20 141/346 141/347 141/349 141/354 141/366 251/149.1 251/149.6 251/331 251/61.2 251/83 29/464 29/464S 422/112 422/112P 422/129 422/129P 422/162 422/211 422/212 422/234 422/236 422/238 422/240 422/255 422/305 423/644 423/648.1 423/657 429/19 429/25 429/34 429/35 429/39 429/410 429/410P 429/410S 429/416 429/416S 429/421 429/421S 429/443 429/443P 429/446 429/446S 429/513 429/513S 429/515 429/515S 429/535 429/535P 429/54 429/54S 48/118.5 48/118.500S 48/120 48/127.9 48/128 48/174 48/197.00R 48/197R 48/198.2 48/61 48/61P 48/61S 48/62.00R 48/62R 48/76

Family:

Publication number	Publication date	Application number	Application date
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MASAAKI; SAWADA TOSHIO; YAMADA EIJI; HT THAN LAW GROUP; HT LAW GROUP WATERFRONT
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17) Family number: 32130554 (US2006194448A)

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Title: REPLICATION TOOLS AND RELATED FABRICATION METHODS AND APPARATUS

Abstract: Source: US2006194448A Durable seamless replication tools are disclosed for replication of seamless relief patterns in desired media, for example in optical recording or data storage media. Methods of making such durable replication tools are disclosed, including preparing a recording substrate on the inner surface of a support cylinder, recording and developing a relief pattern in the substrate, creating a durable negative relief replica of the pattern, extracting the resulting durable tool sleeve from a processing cell, and mounting the tool sleeve on a mounting fixture. Apparatus are disclosed for fabricating such seamless replication tools, including systems for recording a desired relief pattern on a photosensitive layer on an inner surface of a support cylinder. Also disclosed are electrodeposition cells for forming a durable tool sleeve having a desired relief pattern. The replication tool relief features may have critical dimensions down to the micron and nanometer regime.

Classifications:

International (ipc 8-9): G11B7/26 A01J21/00 B01J19/08 B05D1/28
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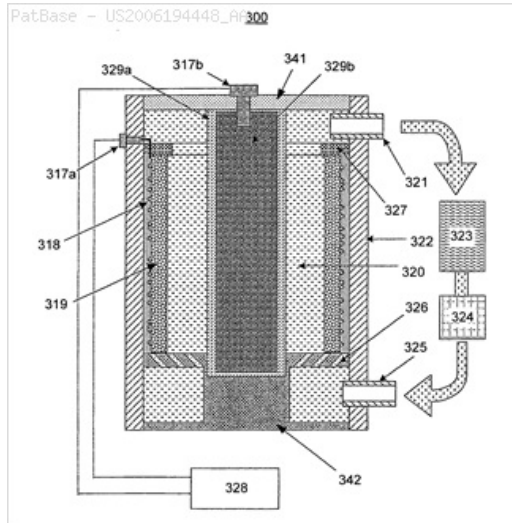
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Priority:

EP20060773532	20060620	US20040537847P	20040121	US20040538120P	20040121
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US20140575034	20141218	US20150720193	20150522	US20160090265	20160404
US20160213907	20160719				

Probable Assignee: MICROCONTINUUM INC

Assignee(s): (std): FREY TIMOTHY ; FREY TIMOTHY J ; KIME MILFORD ; MICROCONTINUUM INC ; MICROCONTINUUM INC ; MICROCONTINUUM INC ; SLAFER W DENNIS ; WHITE MATTHEW B ; SLAFER W D ; WHITE MATTHEW ; SLAFER DENNIS W

Assignee(s): MICROCONTINUUM INC CAMBRIDGE ; SLAFER W

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Inventor(s): SLAFER W DENNIS ARLINGTON ; SLAFER W

Agent(s): RICHES MCKENZIE AND HERBERT LLP; G RONALD BELL AND ASSOCIATES; MUELLER BORE AND PARTNER PATENTANWALTE PARTG MBB; HILL JUSTIN JOHN ET AL; AKIMOTO YOSHIO; ONO SHINJIRO; SHAMOTO ICHIO; KOBAYASHI YASUSHI; TOMITA HIROYUKI; CHIBA AKIO; MCDERMOTT WILL AND EMERY LLP, ATTN: INTELLECTUAL PROPERTY DEPARTMENT; MCDERMOTT WILL AND EMERY LLP ATTN INTELLECTUAL PROPERTY DEPARTMENT; MCDERMOTT WILL AND EMERY LLP; KUSMER TOBY H ET AL; KUSMER TOBY H

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT

18) Family number: 32849544 (US2006085034A)

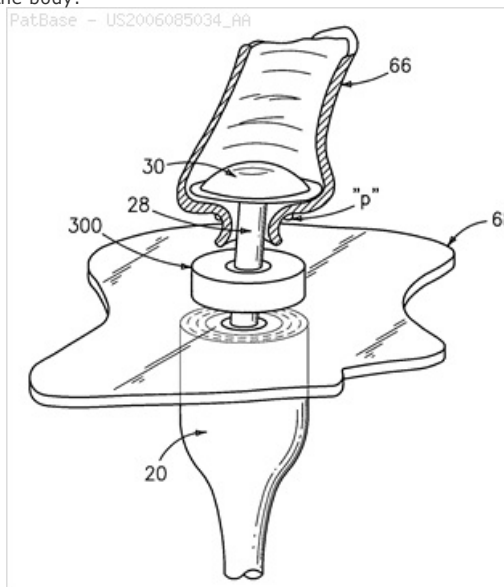
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Title: SUPPORT STRUCTURES AND METHODS OF USING THE SAME

Abstract: Source: US2006085034A According to an aspect of the present disclosure, an apparatus for forming an anastomosis between adjacent intestinal sections of tissue is provided. The apparatus includes an anastomosis device having an anvil and a tubular body portion, wherein the anvil is selectively attachable to the tubular body portion by a shaft; and a support structure for deposition between the intestinal sections of tissue. The support structure includes a body defining an aperture therein for receiving the shaft. The body has an outer terminal edge. The support structure includes at least one layer of expandable material disposed at the outer terminal edge of the body.

Classifications:

International (IPC 8-9): A61B1/00 A61B17/00 A61B17/03
A61B17/04 A61B17/064 A61B17/068 A61B17/072 A61B17/08
A61B17/10 A61B17/11 A61B17/115 A61B17/29 A61B17/3211
A61D1/00 A61L31/00 A61M31/00 A61M37/00 (Advanced/Invention);
A61B17/00 A61B17/072 A61B17/11 A61L31/04 (Advanced/Non-invention);
A61B17/00 A61B17/03 A61B17/04 A61B17/068 A61B17/32
A61L31/00 A61M31/00 A61M37/00 (Core/Invention);
A61L31/04 (Core/Non-invention)
CPC: A61B2017/07214 A61B17/1155 A61B17/07207
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European: A61B17/00L A61B17/072 A61B17/072B A61B17/072R
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K61B17/00N4 K61B17/00N8 K61B17/00S21 K61B17/00S22
K61B17/00S6 K61B17/072H K61B17/072R K61B17/115C
K61B17/11D K61B17/29J2
US: 1/1 128/898 227/175.1 227/175.100P 227/175.100S 227/176.1
227/178.1 227/179.1 227/179.100P 227/180.1 227/180.100P 227/19
227/19S 606/1 606/153 606/153P 606/154 606/1S 606/214
606/214P 606/219 606/219P

**Family:**

Publication number	Publication date	Application number	Application date
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Priority:

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US20150972380	20151217	US20160201875	20160705		

Probable Assignee: COVIDIEN LP

Assignee(s): (std): CAPPOLA KENNETH M ; COVIDIEN LP ; TYCO HEALTHCARE ; FOWLER DAVID N ; CRISCUOLO CHRISTOPHER J ; TARINELLI DANYEL J ; SNIFFIN KEVIN ; HADBA AHMAD ROBERT ; HADBA AHMAD R ; FOWLER DAVID ; BETTUCHI MICHAEL ; BETTUCHI MICHAEL J ; CAPELLA ROBERT ; VIOLA FRANK J ; TYCO HEALTHCARE GROUP LP ; SCIRICA PAUL ; TARINELLI RACENET DANYEL J

Assignee(s): COVIDIEN LP MANSFIELD ; TYCO HEALTHCARE GROUP LP195 MCDERMOTT ROADNORTH HAVENCT06473US ; TYCO HEALTHCARE GROUP LP MANSFIELD ; CAPPOLA KENNETH ; TYCO HEALTHCARE GOUP LP

Inventor(s): (std): BETTUCHI MICHAEL ; BETTUCHI MICHAEL J ; CAPELLA ROBERT ; CAPPOLA KENNETH ; CAPPOLA KENNETH M ; CRISCUOLO CHRISTOPHER ; CRISCUOLO CHRISTOPHER J ; FOWLER DAVID N ; FOWLER DAVID ; HADBA AHMAD ; HADBA AHMAD R ; HADBA AHMAD ROBERT ; SCIRICA PAUL ; SCIRICA PAUL A ; SNIFFIN KEVIN ; TARINELLI DANYEL J ; TARINELLI DANYEL J ; TARINELLI RACENET DANYEL ; TARINELLI RACENET DANYEL J ; VIOLA FRANK ; VIOLA FRANK J ; MICHAEL J BETTUCHI

Inventor(s): ROBERT CAPELLA ; VIOLA FRANK J SANDY HOOK ; VIOLA FRANK J SANDY HOOK CT ; VIOLA FRANK JUS ; VIOLA FRANK SANDY HOOK ; TARINELLI DANYEL J MIDDLETOWN ; TARINELLI DANYEL J MIDDLETOWN CT ; TARINELLI DANYEL JUS ; TARINELLI DANYEL MIDDLETOWN ; SNIFFIN KEVIN DANBURY ; SNIFFIN KEVIN DANBURY CT ; SNIFFIN KEVINUS ; HADBA AHMAD ROBERT WALLINGFORD ; HADBA AHMAD RUS ; HADBA AHMAD WALLINGFORD ; KEVIN SNIFFIN ; MICHAEL BETTUCHI ; HADBA AHMAD R WALLINGFORD CT ; FOWLER DAVID CHESHIRE ; FOWLER DAVID CHESHIRE CT ; FOWLER DAVID N CHESHIRE ; FOWLER DAVIDUS ; FRANK J VIOLA ; CRISCUOLO CHRISTOPHER J BRANFORD ; CRISCUOLO CHRISTOPHER J BRANFORD CT ; CRISCUOLO CHRISTOPHER JUS ; DANYEL J TARINELLI ; DAVID FOWLER ; DAVID N FOWLER ; CRISCUOLO CHRISTOPHER BRANFORD ; AHMAD R HADBA ; AHMAD ROBERT HADBA ; CHRISTOPHER J CRISCUOLO ; CAPELLA ROBERT SHELTON ; CAPELLA ROBERT SHELTON CT ; CAPELLA ROBERTUS ; BETTUCHI MICHAEL JUS ; BETTUCHI MICHAEL MIDDLETOWN ; BETTUCHI MICHAEL MIDDLETOWN CT

Agent(s): SPRUSON AND FERGUSON; MCFADDEN FINCHAM; MCFADDEN FINCHAM INC; OSLER HOSKIN AND HARCOURT LLP; HOFFMANN EITLE PATENT U RECHTSANWAELTE PARTMBB; SOAMES CANDIDA JANE; LLOYD JOHN SCOTT; HOFFMANN EITLE; MASCHIO ANTONIO; DE ELZABURU ALBERTO; UNITED STATES

SURGICAL , A DIVISION OF TYCO HEALTHCARE GROUP LP; UNITED STATES SURGICAL A DIVISION OF TYCO HEALTHCARE GROUP LP; TYCO HEALTHCARE GROUP LP,D/B/A COVIDIEN; TYCO HEALTHCARE GROUP LP D B A COVIDIEN

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

19) Family number: 53664537 (US2013178895A)

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Title: SURGICALLY CLOSING PERCUTANEOUSLY PUNCTURES

Abstract: Source: US2013178895A A closure device for sealing a percutaneous puncture in a wall of a body passageway, the closure device including at least one of a toggle configured to engage an interior surface of the body passageway or a plug configured to engage an exterior surface of the body passageway and a guide wire configured to extend from an outside of the body to inside the body passageway, wherein at least one of the toggle and the plug is associated with the guide wire.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/03 (Advanced/Invention)

CPC: A61B2017/00592 A61B2017/00606 A61B2017/00619

A61B2017/00628 A61B2017/00659 A61B2017/00663

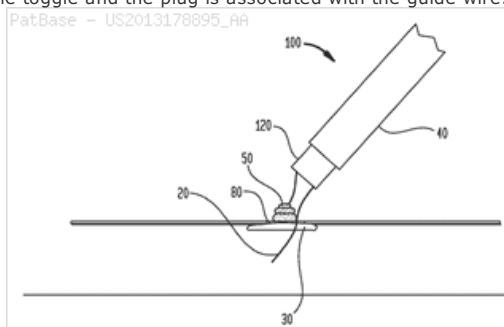
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US: 606/213 606/215

PatBase - US2013178895_AA



Family:

Publication number	Publication date	Application number	Application date
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EP2770916 A1	20140903	EP20120843990	20121025
EP2770916 A4	20150429	EP20120843990	20121025
EP2770916 B1	20160706	EP20120843990	20121025
EP3092953 A1	20161116	EP20160177200	20121025
US2013178895 AA	20130711	US20120605720	20120906
US2015100083 AA	20150409	US20140569291	20141212
WO13063227 A1	20130502	WO2012US61855	20121025

Priority:

EP20120843990 20121025 US20110551251P 20111025 US20120621409P 20120406
US20120605720 20120906 WO2012US61855 20121025 US20140569291 20141212

Probable Assignee: ESSENTIAL MEDICAL INC

Assignee(s): (std): ARORA PIYUSH ; DOTSEY MIKE ; ESSENTIAL MEDICAL INC ; WALTERS GREG ; ESSENTIAL MEDICAL LLC ; NISPEL MICHAEL ; ROUBIN GARY

Assignee(s): ESSENTIAL MEDICAL INC MALVERN

Inventor(s): (std): ARORA PIYUSH ; DOTSEY MICHAEL AUSTIN ; DOTSEY MIKE ; NISPEL MICHAEL ; NISPEL MICHAEL THOMAS ; ROUBIN GARY ; WALTERS GREG ; WALTERS GREG A

Inventor(s): WALTERS GREG WAYNE ; ROUBIN GARY WAYNE ; NISPEL MICHAEL WAYNE ; DOTSEY MIKE WAYNE ; ARORA PIYUSH WAYNE

Agent(s): HASELTINE LAKE LLP; KREBS ACHIM; HAMMOND DAVID MATTHEW; VERGA MICHAEL G

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 KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW 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