

Search history

Search 1: TA=(bearing and sleeve and thrust and taper*) and PD<20140110 and EC=(F04D) (Results 7)

Search 2: TAC=(bearing and sleeve and thrust and taper*) and PD<20140110 and EC=(F04D) (Results 31)

Title: SEAL/**BEARING** ASSEMBLY

Abstract: For fitment into the stuffing box of a centrifugal pump. A spiral-groove is cut on the outer surface of the rotor of a pair of **tapered bearing** surfaces. The groove is 0.02 mm deep, 2 mm wide, and its circumferential length is 50 cm. Barrier-liquid is fed to an entry-mouth of the spiral-groove, and groove generates a pressure in the stuffing box high enough to overcome process pressure. The barrier-liquid may be water. The interface between the **bearing** surfaces is sealed from the process-fluid and from the outside.

Classifications:

International (IPC 8-9): F04D29/00 F04D29/04 F04D29/047 F04D29/10 F04D29/22 F04D29/32 F04D3/02 F16J15/40 F16J15/447 (Advanced/Invention);

F04D29/04 F04D29/08 F04D29/18 F04D3/00 F16J15/40 F16J15/44 (Core/Invention)

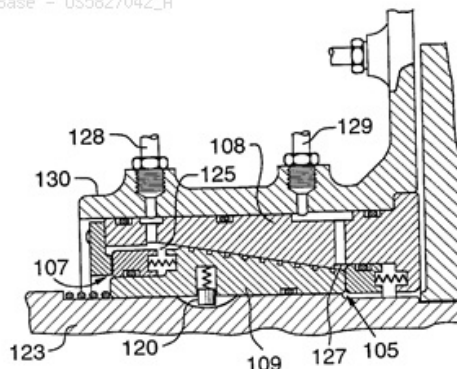
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CPC: F16C17/105 F16C21/00 F16C33/107 F16C33/741 F04D13/12 F16C2240/42 F04D29/047 F04D3/02 F04D29/108 F04D29/2266 F16J15/406

European: F04D29/04 F04D29/047 F04D29/04P F04D29/10P2 F04D29/22D2 F04D3/02 F16J15/40D

US: 277/65 277/81R 415/112 415/180 415/231

PatBase - US5827042_A



Family:

Publication number	Publication date	Application number	Application date
AT222332 E	20020815	AT19950922374T	19950619
AU199527093 A1	19960115	AU19950027093	19950619
AU689906 B2	19980409	AU19950027093	19950619
CA2126262 AA	19951221	CA19942126262	19940620
CA2193482 AA	19951228	CA19952193482	19950619
CA2193482 C	20020820	CA19952193482	19950619
DE69527795 D1	20020919	DE19956027795	19950619
DE69527795 T2	20030403	DE19956027795T	19950619
EP0769111 A1	19970423	EP19950922374	19950619
EP0769111 B1	20020814	EP19950922374	19950619
FI113888 B	20040630	FI19960005142	19961220
FI965142 A	19961220	FI19960005142	19961220
FI965142 A0	19961220	FI19960005142	19961220
GB2304159 A1	19970312	GB19960026495	19950619
GB2304159 B2	19980610	GB19960026495	19950619
GB9423260 A0	19950104	GB19940023260	19941116
GB9425594 A0	19950215	GB19940025594	19941219
GB9506195 A0	19950517	GB19950006195	19950327
GB9626495 A0	19970205	GB19960026495	19950619
JP10501604 T2	19980210	JP19960501433T	19950619
JP3050407 B2	20000612	JP19960501433T	19950619
NO965488 A	19970219	NO19960005488	19961219
NO965488 A0	19961219	NO19960005488	19961219
US5827042 A	19981027	US19960770044	19961219
WO9535457 A1	19951228	WO1995CA00362	19950619

Priority:

CA19942126262 19940620 GB19940023260 19941116 GB19940025594 19941219
 GB19950006195 19950327 GB19960026495 19950619 WO1995CA00362 19950619
 US19960770044 19961219

Probable Assignee: AW CHESTERTON CO

Assignee(s): (std): CHESTERTON A W CO ; RAMSAY THOMAS W ; THOMAS W RAMSAY ; RAMSAY THOMAS WILSON

Assignee(s): THOMAS WILSON RAMSAY ; RAMSAY THOMAS W AW CHESTERTON CO ; RAMSAY THOMAS W A W CHESTERTON CO ; RAMSAY THOMAS WILLIAM ; FLEET CAPITAL CORP ; AW CHESTERTON CO ; A W CHESTERTON CO ; A W CHESTERTON CO STONEHAM

Inventor(s): (std): RAMSAY THOMAS W ; RAMSAY THOMAS WILSON

Inventor(s): THOMAS W RAMSAY ; THOMAS WILSON RAMSAY ; RAMSAY THOMAS WILLIAM

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; ASQUITH ANTHONY

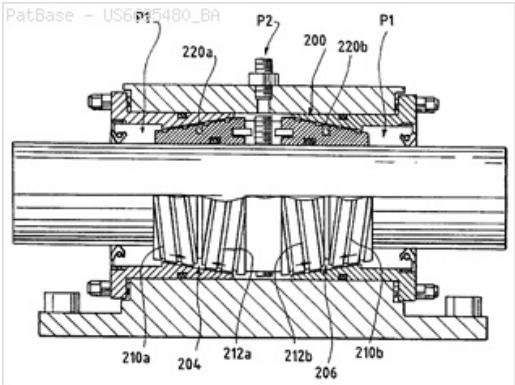
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Title: Opposed flow seal/bearing assembly

Abstract: A seal and bearing apparatus for a rotating shaft including a pair of sleeves with two spiral grooves (14) on an inclined surface (16).

Classifications:

International (IPC 8-9): F04D29/04 F04D29/047 F04D29/10 F16C17/10 F16C33/10 F16C33/74 (Advanced/Invention); F04D29/04 F04D29/08 F16C17/00 F16C33/04 F16C33/72 (Core/Invention)
International (IPC 1-7): F04D29/06 F16C17/10
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European: F04D29/04 F04D29/047 F04D29/04P F04D29/10P F16C17/10G2 F16C33/10L5D F16C33/74
US: 384/110 384/112 384/130 384/292



Family:

Publication number	Publication date	Application number	Application date
AU200062118 A1	20010130	AU20000062118	20000713
AU200062118 A5	20010130	AU20000062118	20000713
US6695480 BA	20040224	US20020030828	20020111
WO0104503 A1	20010118	WO2000US19092	20000713

Priority:

US19990144410P 19990713 WO2000US19092 20000713 US20020030828 20020111

Probable Assignee: AW CHESTERTON CO

Assignee(s): (std): BRIDGE DOUGLAS T ; CHESTERTON A W CO ; RAMSAY THOMAS W

Assignee(s): FLEET CAPITAL CORP ; A W CHESTERTON CO ; AW CHESTERTON CO

Inventor(s): (std): BRIDGE DOUGLAS T ; RAMSAY THOMAS W

Inventor(s): THOMAS W RAMSAY ; DOUGLAS T BRIDGE

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 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: Pump shell for multistage metal working pump

Abstract: An improved pump shell for a multistage metal working pump includes a plurality of pump shell units housed in series within a hollow cylindrical casing and has the impellers driven by a shaft. Each pump shell unit has an inner shell which forms a holding end at one side and a sealing flange at another side. The holding end of one pump shell unit may align and engage precisely and easily with the sealing flange of an adjacent pump shell unit to form a smooth fluid passage from the inlet of the impeller through the inner shell so that pumping efficiency may be enhanced with less turbulence. The sealing flange, holding end and the casing also form a close annular compartment for holding a seal ring inside to provide effective sealing function. The pump shell may be produced by stamping at low cost.

Classifications:

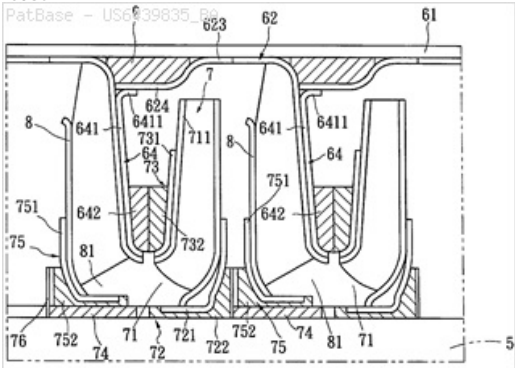
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International (IPC 1-7): F04D1/06 F04D17/12 F04D29/40

CPC: F04D1/063 F04D29/4266 F04D29/628

European: F04D1/06B F04D29/42P1 F04D29/62P

US: 415/104 415/172.1 415/199.2 415/200 415/214.1 415/215.1



Family:

Publication number	Publication date	Application number	Application date
TW415545 Y	20001211	TW20000201923U	20000202
US6439835 BA	20020827	US20000643860	20000823

Priority:

TW19890201923 20000202 TW20000201923U 20000202

Probable Assignee: INDUSTRIAL TECHNOLOGY RESEARCH INST

Assignee(s): (std): CHIEN HUAN JAN ; IND TECH RES INST ; KAO SHU FEN ; OU PAO YIN ; LIAW RONG JAU

Assignee(s): INDUSTRIAL TECHNOLOGY RESEARCH INST ; INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE

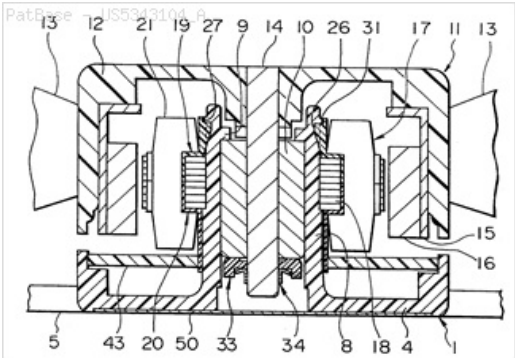
Inventor(s): (std): CHIEN HUAN JAN ; GAU SHU FEN ; JIAN HUAN RAN ; KAO SHU FEN ; LIAU RUNG JAU ; LIAW RONG JAU ; OU BAU YIN ; OU PAO YIN

Title: FAN MOTOR

Abstract: A fan motor having a structure which allows a stopper to keep contact with a **thrust** plate on a circular contact area only, by inserting a shaft through a **sleeve bearing**, and by attaching the stopper, against the **thrust** plate, onto the end portion of the shaft. This assures uniform sliding of the **thrust** plate against the **sleeve bearing** without partial contact, even if the stopper is attached in a slight inclination with respect to the **thrust** plate. Localized wear of the **thrust** plate and rubbing mechanical noise are thus prevented.

Classifications:

International (IPC 8-9): C04B35/46 C04B35/468 F04D25/06 F04D29/04 F16C17/10 H01B3/12 H01G4/12 H02K1/18 H02K15/12 H02K3/52 H02K5/08 H02K5/16 H02K5/167 H02K5/173 H02K5/22 H02K7/14 H02K9/28 (Advanced/Invention); C04B35/46 C04B35/462 F16C17/00 H01B3/12 H01G4/12 H02K15/12 H02K5/08 H02K5/16 H02K7/14 (Core/Invention)
International (IPC 1-7): F16C17/10 H02K1/06 H02K15/12 H02K5/08 H02K5/16 H02K5/167 H02K5/22 H02K7/08 H02K7/14 H02K9/28
CPC: H02K1/187 H02K3/522 H02K5/1675 H02K5/1735 H02K5/225 H02K2203/03 H02K2203/06 H02K2211/03 F04D29/0513 F04D25/062
European: F04D25/06B2 F04D29/04C2 F04D29/051 H02K1/18C H02K3/52A1 H02K5/167D H02K5/173D H02K5/22B T02K203/03 T02K203/06 T02K211/03
US: 310/216.114 310/217 310/67R 310/90 310/91



Family:

Publication number	Publication date	Application number	Application date
JP2994150 B2	19991227	JP19920224831	19920730
JP3131027 B2	20010131	JP19920162146	19920527
JP5336695 A2	19931217	JP19920162146	19920527
JP6054478 A2	19940225	JP19920224831	19920730
TW263629 B	19951121	TW19930104147	19930526
US5343104 A	19940830	US19930067843	19930527
US5436519 A	19950725	US19940178518	19940107

Priority:

JP19920162146 19920527 JP19920224831 19920730 US19930067843 19930527
US19940178518 19940107

Probable Assignee: NIPPON DENSAN CORP

Assignee(s): (std): NIHON DENSAN KK

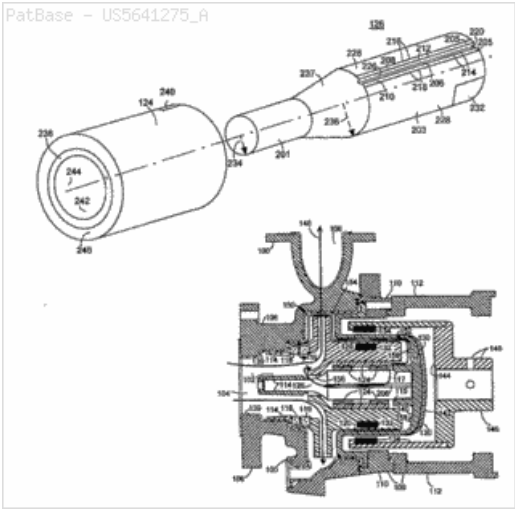
Assignee(s): NIPPON DENSAN CORP

Inventor(s): (std): TAKAHASHI SHUJI ; YANAI EIJI ; MORIKAWA FUMIHIRO ; TAKAHASHI HIDEJI ; KAWATE YOSUKE

Title: GROOVED SHAFT FOR A MAGNETIC-DRIVE CENTRIFUGAL PUMP

Abstract: The grooved shaft for a magnetic-drive centrifugal pump preferably has an axial groove with a semi-elliptical or U-shaped groove cross section. Adjoining the axial groove is a flat area which is tapered tangentially relative to a substantially cylindrical shaft area. The grooved shaft optimally has a front shaft radius and a rear shaft radius, wherein the front shaft radius is smaller than the rear shaft radius such that the front shaft radius may be oriented near an impeller intake to decrease hydraulic flow resistance. Meanwhile, the rear shaft radius provides increased axial and radial load capacity for the grooved shaft. In practice, the grooved shaft is incorporated into a magnetic-drive centrifugal pump and the groove is statically oriented in a position of minimal radial loading. In the centrifugal pump, the grooved shaft forms an immobile channel for the internal circulation of pumped fluid about the product-lubricated wearing surfaces so the grooved shaft and an associated bearing are amply lubricated or cooled.

Classifications:
International (IPC 8-9): F04D13/02 F04D29/04 F04D29/041 F04D29/043 F04D29/046 F04D29/047 F04D29/06 (Advanced/Invention); F04D13/02 F04D29/04 F04D29/06 (Core/Invention)
International (IPC 1-7): F04B17/00 F04B53/18
CPC: F04D13/026 F04D29/047 F04D29/0413 F04D29/043 F04D29/0465 F04D29/061 F05B2240/60 F05C2203/0817
European: F04D13/02B3 F04D29/04 F04D29/041B F04D29/043 F04D29/046D F04D29/047 F04D29/04P F04D29/06P R05B240/60 R05C203/08N2S
US: 415/176 417/370 417/420 418/176



Family:

Publication number	Publication date	Application number	Application date
US5641275 A	19970624	US19950378774	19950126
US5997264 A	19991207	US19960844405	19960928

Priority:

US19950378774 19950126 US19960844405 19960928

Probable Assignee: SUNDYNE CORP

Assignee(s): (std): ANSIMAG INC

Assignee(s): ANSIMAG INC A DELAWARE CORP ; DEUTSCHE BANK NEW YORK BRANCH COLLATERAL AGENT AG ; DEUTSCHE BANK NEW YORK BRANCH COLLATERAL AGENT AG AS ; SUNDYNE CORP ; SUNDYNE LLC

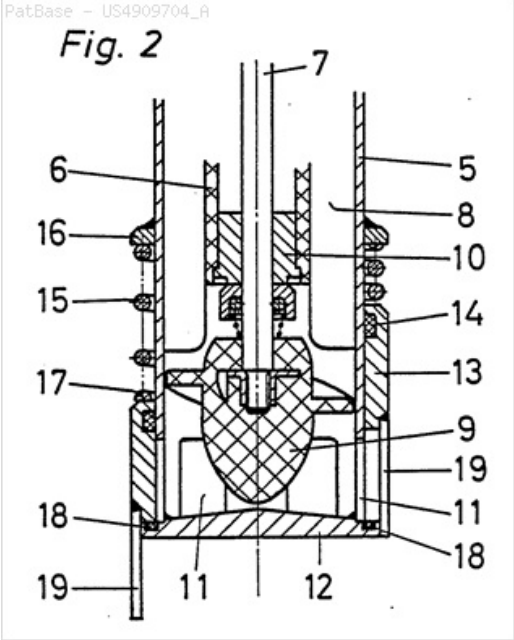
Inventor(s): (std): BROWN JEFF S ; KLEIN MANFRED P ; BROWN JEFFREY S

Title: Barrel pump

Abstract: The barrel pump has at the lower end of its housing wall a sliding sleeve which-in the open position-exposes the inlet openings at the lower end of the housing wall and-in the closed position-in which it rests against a base plate, closes these inlet openings. The base plate projects in the radial direction beyond the housing wall and, consequently, closes the pump from below. Penetration by the liquid can, hence, only occur through the inlet openings provided on the periphery of the housing wall of the pump. Displacement of the sliding sleeve takes place in that at the underside of the sliding sleeve pressure pieces are provided, which in the close position project beyond the base plate downward and upon the pump being placed down due to the weight of the pump acting downward are displaced upward against the action of a spring acting on the sliding sleeve which frees the sliding sleeve from its sealing contact on the base plate and, consequently, permits entrance of the liquid through the inlet openings. When the pump is lifted, the sliding sleeve is pushed again into its closed position by the spring. Manipulating the sliding sleeve can also take place manually with the manipulating device.

Classifications:

International (IPC 8-9): F04D13/08 F04D15/00
F04D29/70 (Advanced/Invention);
F04D13/06 F04D15/00 F04D29/00 (Core/Invention)
International (IPC 1-7): F04D13/08 F04D29/52 F04D29/60
F04D29/70
CPC: F04D13/08 F04D15/0005
European: F04D13/08 F04D15/00B
US: 415/157 417/411



Family:

Publication number	Publication date	Application number	Application date
AT63978 E	19910615	AT19880104035T	19880314
DE3718325 A1	19881013	DE19873718325	19870601
DE3718325 C2	19890119	DE19873718325	19870601
DE3862959 D1	19910704	DE19883862959	19880314
DE8715134 U1	19880114	DE19870015134U	19870601
EP0282956 A2	19880921	EP19880104035	19880314
EP0282956 A3	19890426	EP19880104035	19880314
EP0282956 B1	19910529	EP19880104035	19880314
EP0282956 B2	19960501	EP19880104035	19880314
ES2022940 B3	19911216	ES19880104035T	19880314
ES2022940 T5	19961001	ES19880104035T	19880314
JP1015500 A2	19890119	JP19880064659	19880316
JP64015500 A2	19890119	JP19880064659	19880316
US4909704 A	19900320	US19880166720	19880311

Priority:

DE19873708496 19870316 DE19870015134U 19870601 DE19873718325 19870601
EP19880104035 19880314 EP19880104035 19880314 DE19883862959 19880314

Probable Assignee: KARL LUTZ A CORP OF GERMANY FA

Assignee(s): (std): LUTZ KARL FA ; LUTZ PUMPEN GMBH AND CO KG ; KARL RUTSUTSU FA ; LUTZ FA KARL

Assignee(s): KARL LUTZ A CORP OF GERMANY FA ; KARL LUTZ ERLENSTRASSE 5 7 6980 WERTHEIM A CORP FA ; FA KARL LUTZ ; FA KARL LUTZ 6980 WERTHEIM DE ; FA KARL RUTSUTSU ; FIRMA KARL LUTZ

Inventor(s): (std): KAARU RUTSUTSU ; LUTZ KARL

Inventor(s): LUTZ KARL 6980 WERTHEIM DE ; LUTZ KARL W 6980 WERTHEIM 2 DE

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

Title: TURBO MOLECULAR PUMP WITH IMPROVED **BEARING** ASSEMBLY

Abstract: A single ended turbomolecular vacuum pump operable in the free molecular flow pressure range having an improved **bearing** assembly between the motor rotor and the pump rotor discs is disclosed. The improved **bearing** assembly which is of the "plain" or "**sleeve**" liquid lubricated type has a relatively high ratio of journal diameter to **bearing** axial length. The improved **bearing** assembly is characterized by improved heat transmission capabilities, high tolerance for misalignment and long life.

Classifications:

International (IPC 8-9): F04D19/04 F04D21/00 F04D29/04
F04D29/056 F04D29/057 F04D29/059 F16C27/00

F16C32/06 (Advanced/Invention);

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F16C32/06 (Core/Invention)

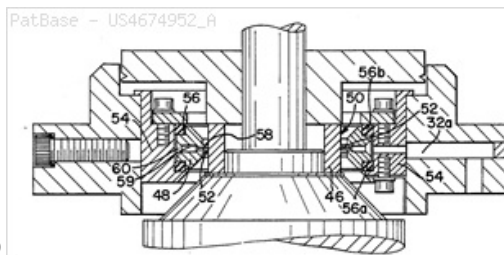
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F16C27/00 F16C32/0685 F16C2360/45

European: F04D19/04B F04D29/04C F04D29/05 F04D29/056

F04D29/057 F04D29/059 F16C27/00 F16C32/06R2

US: 384/114 384/115 384/399 415/170.1 415/170R 415/175 415/229
415/230



Family:

Publication number	Publication date	Application number	Application date
CA1240302 A1	19880809	CA19840464420	19841001
EP0147015 A2	19850703	EP19840306804	19841005
EP0147015 A3	19860319	EP19840306804	19841005
JP60156996 A2	19850817	JP19840211190	19841008
US4674952 A	19870623	US19850767657	19850820
US4767265 A	19880830	US19860946987	19861229
US4806075 A	19890221	US19860941815	19861215

Priority:

US19830539977 19831007 CA19840464420 19841001 US19850767657 19850820
US19860941815 19861215 US19860946987 19861229

Probable Assignee: SARGENT WELCH SCIENTIFIC CO

Assignee(s): (std): SAAJIENTO UERUCHI SAIENTEIFUIT ; SARGENT WELCH SCIENTIFIC CO

Assignee(s): SARGENT WELCH SCIENTIFIC COMPANY ; SAAJIENTO UERUCHI SAIENTEIFUITSUKU CO ;
CONTINENTAL ILLINOIS NATIONAL BANK AND TRUST CO ; CONTINENTAL ILLINOIS NATIONAL BANK
AND TRUST CO OF ; CONTINENTAL ILLINOIS NATIONAL BANK AND TRUST CO OF CHICAGO ;
OSTERSTROM GORDON E

Inventor(s): (std): GOODON II OSUTAASUTOROOMU ; LIVSHITS LEONID ; OSTERSTOM GORDON E ; OSTERSTROM
GORDON C ; OSTERSTROM GORDON E ; RENZ MARK B

Agent(s): OSLER HOSKIN AND HARCOURT LLP

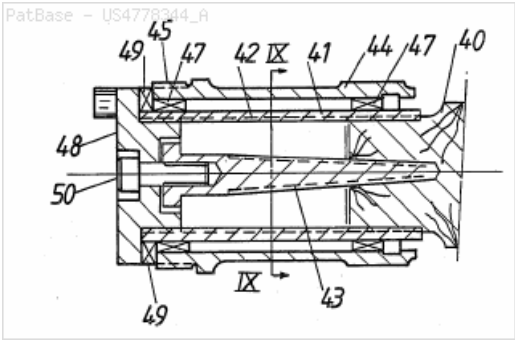
Designated states: CH DE FR GB IT LI

Title: Variable pitch mechanisms

Abstract: A variable pitch mechanism for a propeller comprises a crank pin on each rotatable blade of a propeller, or fan impeller, rotatable about a longitudinal axis thereof, a translational member having a crank pin engagement element for each crank pin, an actuating device connected to the translational member for causing the translational member to be moved in a desired direction resulting in movement of each crank pin means to cause each blade to rotate on its longitudinal axis in unison with and in the same sense as the other blade or blades of the propeller or fan impeller to cause variation in pitch of the blades. The propeller blade root assembly may have a housing, a blade root mounting rotatable about the longitudinal axis of the blade in the housing, an end cap fixed to the blade root mounting and having a **thrust bearing** engaging the housing to resist centrifugal force acting on the blade. The blade root may have transverse slots extending axially at right angles, a **sleeve** screwed onto the blade root, and a **tapered** bolt screwed into the end of the blade root on the axial centerline thereof to compress the root onto the inner screwed surface of the **sleeve**, the **tapered** bolt being fixed to the end cap.

Classifications:

International (IPC 8-9): B64C11/06 B64C11/44 F03D7/02 F04D29/36 (Advanced/Invention)
International (IPC 1-7): B64C11/20 B64C11/44
CPC: B64C11/06 B64C11/44 F03D7/0224 F04D29/36 F05B2260/74 F05B2260/79 Y02E10/723
European: B64C11/06 B64C11/44 F03D7/02D2 F04D29/36 R05B260/74 R05B260/79 Y02E10/72F
US: 416/155 416/167 416/239



Family:

Publication number	Publication date	Application number	Application date
US4778344 A	19881018	US19860909880	19860922

Priority:

NZ19850213568 19850920

Probable Assignee:

WATER ABRAHAM

Assignee(s): (std):

WATER ABRAHAM

Inventor(s): (std):

WATER ABRAHAM

Title: AXIAL FAN

Abstract: An axial flow fan with adjustable blades 18 has a spindle 16 for each blade mounted in a hub rim 12. Each spindle has associated therewith a replaceable cartridge 58 having a **thrust bearing** 70 therein and spaced radial **bearings** 64, 70. In order to service the **bearing**, the cartridge can simply be disconnected, e.g. by unscrewing from the rim having removed the blade 18.

Classifications:

International (ipc 8-9): F01D7/00 F04D29/36 (Advanced/Invention); F01D7/00 F04D29/32 (Core/Invention)

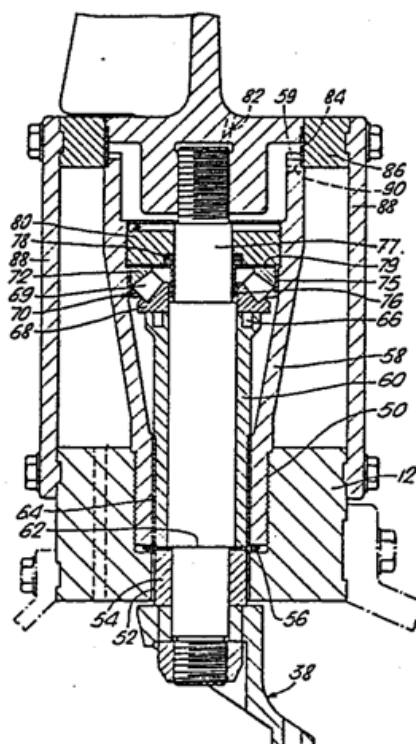
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CPC: F05D2260/74 F05D2260/76 F04D29/362 F01D7/00

European: F01D7/00 F04D29/36B R05B260/74 R05B260/76

US: 416/147 416/167 416/205

PatBase - US4630999_A



Family:

Publication number	Publication date	Application number	Application date
AU198433826 A1	19850418	AU19840033826	19841004
AU566957 B2	19871105	AU19840033826	19841004
DE3366618 D1	19861106	DE19833366618	19831014
DK489784 A	19850415	DK19840004897	19841012
DK489784 A0	19841012	DK19840004897	19841012
EP0137873 A1	19850424	EP19830306249	19831014
EP0137873 B1	19861001	EP19830306249	19831014
US4630999 A	19861223	US19840659639	19841011
ZA8407898 A	19850626	ZA19840007898	19841009

Priority:

EP19830306249 19831014

Probable Assignee: HOWDEN JAMES AND CO LTD

Assignee(s): (std): HOWDEN JAMES AND CO LTD ; HOWDEN AND CO LTD JAMES

Assignee(s): HOWDEN AND COMPANY LIMITED JAMES ; HOWDEN AND CO JAMES LTD ; JAMES HOWDEN AND CO A BRITISH CO LTD ; JAMES HOWDEN AND CO LTD ; JAMES HOWDEN AND COMPANY LIMITED

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