

Diego Gonzalez Castillo

**1) Family number: 32790820** (US2009071387 AA)

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**Title:** TRANSPORTATION DEVICE

**Abstract:** This invention relates to a transportation vehicle (10) which is used in transporting passengers and/or goods, which utilizes wind power and the elevating force of water and which has a passenger cabin (5) that moves above water level. The transportation vehicle realized in order to attain the objects of this invention comprises at least one main body (12) which travels at a certain height above water level; an air unit (11) comprising at least one sail (1) which extends perpendicularly to the water surface and which is connected to this main body (12); and at least one underwater unit (13) which travels underwater and which is again connected to the main body (12).

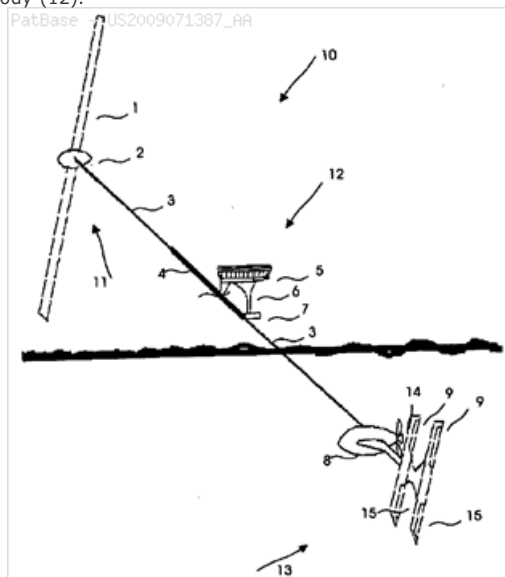
**Classifications:**

**International (IPC 8-9):** B63B1/00 B63B1/10 B63B29/00 B63B35/00 B63C11/00 B63H9/00 B63H9/04 B63H9/06

**International (IPC 1-7):** B63B1/10 B63H9/06

**CPC:** B63B1/107 B63G8/001 B63H9/069

**US:** 114/39.29 114/39.290P



**Family:**

| Publication number     | Publication date | Application number | Application date |
|------------------------|------------------|--------------------|------------------|
| AT469822 E             | 20100615         | AT20050774463T     | 20050811         |
| <b>AU2005288593 AA</b> | 20060406         | AU20050288593      | 20050811         |
| <b>AU2005288593 BB</b> | 20090730         | AU20050288593      | 20050811         |
| <b>CA2576688 AA</b>    | 20070209         | CA20052576688      | 20050811         |
| <b>CA2576688 C</b>     | 20101102         | CA20052576688      | 20050811         |
| DE602005021647 D1      | 20100715         | DE200560021647T    | 20050811         |
| <b>EP1786665 A1</b>    | 20070523         | EP20050774463      | 20050811         |
| <b>EP1786665 B1</b>    | 20100602         | EP20050774463      | 20050811         |
| <b>JP2008509833 T2</b> | 20080403         | JP20070525443T     | 20050811         |
| <b>JP4682201 B2</b>    | 20110511         | JP20070525443T     | 20050811         |
| <b>NZ553227 A</b>      | 20100930         | NZ20050553227      | 20050811         |
| TR200700766 T2         | 20070321         | TR20070000766T     | 20050811         |
| <b>US2009071387 AA</b> | 20090319         | US20050573555      | 20050811         |
| <b>WO06035323 A1</b>   | 20060406         | WO20051B52674      | 20050811         |

**Priority:**

TR20040002003 20040811 WO20051B52674 20050811

**Probable Assignee:** FEYZI ISIKMAN

**Assignee(s):** (std): FEYZI ISIKMAN ; FEYZI MURAT ISIKMAN ; ISIKMAN FEYZI MURAT

**Assignee(s):** FEYZİ MURAT İŞİKMAN ; フェイズィ ムラット イシクマン ; フェイズィ・ムラット・イシクマン

**Inventor(s):** (std): ISIKMAN FEYZI MURAT

**Inventor(s):** FEYZİ MURAT İŞİKMAN ; FEYZİ MURAT İŞİKMAN ; フェイズィ ムラット イシクマン ; フェイズィ・ムラット・イシクマン

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**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 MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO 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

**2) Family number: 73738826** (WO20144501 A1)

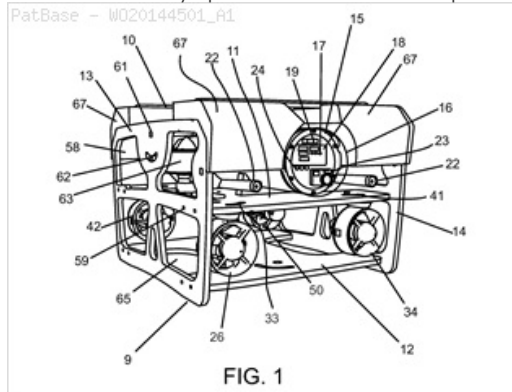
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**Title:** ENGINE ADJUSTMENT SYSTEM FOR REMOTELY OPERATED SUBMARINE VEHICLES, FOR USING ENGINE THRUST

**Abstract:** The present invention belongs to the field of boats or other floating vessels, their devices and means for locating or recovering submerged objects, relating specifically to a device for remaining under water, with means for searching for submerged objects using diving cameras being mechanically joined to a closed base with independent control of propulsion and direction, which consists of a remotely operated submarine vehicle with six engines, four engines with thrust in the horizontal axis and to engines with thrust in the vertical axis, wherein the horizontal thrust engines rotate about a shaft at an angle of 0-45 degrees and wherein the engines are arranged in an additional structure that allows the rotation and locking of the motors according to the ecosystem or environmental conditions to which the remotely operated vehicle is to be exposed.

**Classifications:**

**International (IPC 8-9):** B63C11/00 B63C11/34 B63C11/36  
B63C11/42 B63C11/52 B63G8/00 B63G8/08 B63G8/14 B63G8/16  
**CPC:** B63C11/00 B63C11/34 B63C11/36 B63C11/42 B63C11/52  
B63G8/00 B63G8/08 B63G8/14 B63G8/16



**Family:**

| Publication number   | Publication date | Application number   | Application date |
|----------------------|------------------|----------------------|------------------|
| CO20190000191 A1     | 20190318         | CO20190000191        | 20190110         |
| <b>WO20144501 A1</b> | 20200716         | <b>WO20191B58530</b> | <b>20191007</b>  |

**Priority:**

CO20190000191 20190110

**Probable Assignee:** UNIV SIMON BOLIVAR

**Assignee(s):** (std): UNIV SIMON BOLIVAR

**Assignee(s):** UNIVERSIDAD SIMON BOLIVAR

**Inventor(s):** (std): ABRIL HOWARD OMAR SANTIAGO ; OCHOA PERTUZ CARLOS ANDRES ; PESTANA NOBLES JUAN PABLO ; RODRIGUEZ EUGENIO YIME ; VILLAREAL GONZALEZ REYNALDO FARID ; VILLARREAL GONZALEZ REYNALDO

**Agent(s):** GOMEZ VILLA JOHAN SEBASTIAN ET AL

**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 DJ 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 IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC 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 SA 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

**3) Family number: 62989090 (US2016214693 AA)**

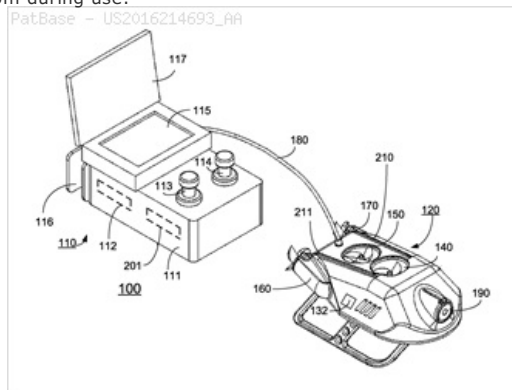
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**Title:** SUBMERSIBLE REMOTE CONTROLLED VEHICLE

**Abstract:** An underwater powered observation system that includes a submersible vehicle assembly with a camera and an on board source of electrical power that receives propulsion directions via a miniature multi-conductor cable connected to a color monitor integral to a control unit. The submersible vehicle assembly is powered by an onboard rechargeable battery that energizes both horizontal and vertical thrusters to guide and move the vehicle assembly through the water from directions communicated by the control unit. The submersible vehicle assembly may include a laser adapted to be directed to the underside of ice so as to locate the vehicle assembly and allow the user to cut a hole in the ice at or near fish. In this manner the vehicle assembly may be utilized for the underwater tasks of locating fish, observing scenery, boat and pier inspection, object recovery, and other underwater tasks. The submersible vehicle assembly is particularly useful for ice fishing where such submersible vehicle assembly may be controlled under the ice to locations of fish. Additional features include identifying water temperature and depth information that may be displayed on the control unit, a hydrophobic coating preventing ice buildup, and a stand adaptable for resting on the bottom during use.

**Classifications:**

**International (IPC 8-9):** B63B35/14 B63C11/52 B63G8/00 B63G8/14  
B63G8/20 B63G8/38  
**CPC:** B63C11/52 B63G2008/007 B63G8/001 B63G8/20 B63G8/38  
**US:** 1/1 701/21



**Family:**

| Publication number     | Publication date | Application number   | Application date |
|------------------------|------------------|----------------------|------------------|
| <b>US10442511 BB</b>   | 20191015         | <b>US20180894924</b> | <b>20180212</b>  |
| <b>US2016214693 AA</b> | 20160728         | <b>US20150814505</b> | <b>20150730</b>  |
| <b>US2017349250 AA</b> | 20171207         | <b>US20170681354</b> | <b>20170819</b>  |
| <b>US2018170495 AA</b> | 20180621         | <b>US20180894924</b> | <b>20180212</b>  |



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|--------------------|----------|----------------|----------|
| <b>GB1375313 A</b> | 19741127 | GB19720007549  | 19720218 |
| IT947837 A         | 19730530 | IT19720020946  | 19720223 |
| JP47009199 U1      | 19721003 | JP19710011025U | 19710224 |
| JP47016199 U1      | 19721025 | JP19710020414U | 19710325 |
| JP48067496 U1      | 19730827 | JP19710113069U | 19711201 |
| US3757721 A        | 19730911 | US19720228578  | 19720223 |

**Priority:**

JP19710011025U 19710224  
JP19710113069U 19711201

JP19710020413 19710325

JP19710020414U 19710325

**Probable Assignee:**

OHISHI YASUHIRO

**Assignee(s):** (std):

OHISHI Y ; OHISHI YASUHIRO

**Assignee(s):**

OHISHI Y JA

**Inventor(s):** (std):

OHISHI Y ; OHISHI YASUHIRO

**Inventor(s):**

OHISHI Y JA ; YASUHIRO OHISHI

**6) Family number: 48891963 (CN102050218 A)**

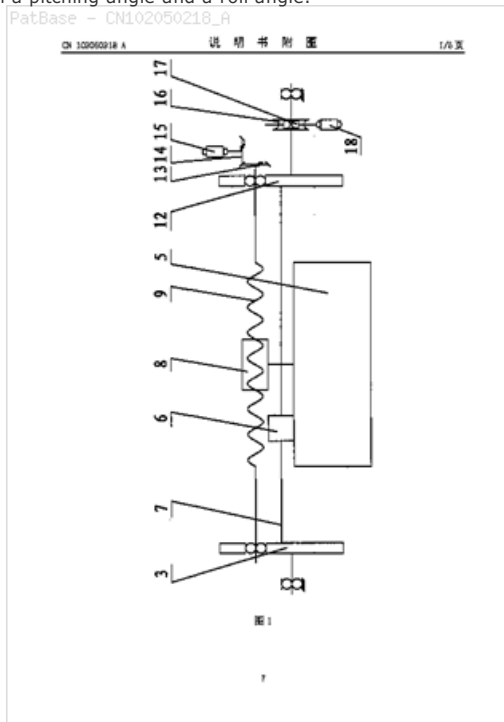
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**Title:** GESTURE ADJUSTING DEVICE FOR UNDERWATER GLIDER

**Abstract:** The invention relates to an underwater measuring platform, in particular to a gesture adjusting device for an underwater glider. Front and rear end covers of a roll support are arranged at two ends of a gesture adjusting pressure shell respectively. A front pitching baffle is arranged on the front end cover of the roll support rotatably. A rear pitching baffle is connected to a worm gear via a connecting frame. The worm gear is arranged on the rear end cover of the roll support rotatably. A roll motor is arranged on the rear end cover of the roll support. An output shaft of the roll motor is connected to a worm engaged with and driving the worm gear. A lead screw is arranged between the front and rear pitching baffles. One end of the lead screw is connected to a pitching motor arranged on the connecting frame via a bevel gear group, and nuts are in thread connection with the lead screw. A battery pack and the nuts are connected as a whole. A guide rail is arranged between the front and rear pitching baffles, and a slide block connected with the battery pack as a whole is arranged on the guide rail. The gesture adjusting device provided by the invention has the advantages of simple and compact structure, low power consumption, high reliability and wide adjusting range between a pitching angle and a roll angle.

**Classifications:**

**International (IPC 8-9):** B63C 11/52 B63G 8/14



**Family:**

| Publication number   | Publication date | Application number | Application date |
|----------------------|------------------|--------------------|------------------|
| <b>CN102050218 A</b> | 20110511         | CN200910219614     | 20091104         |
| CN102050218 B        | 20130612         | CN200910219614     | 20091104         |

**Priority:**

CN200910219614 20091104

**Probable Assignee:** SHENYANG INST AUTOMATION

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**Inventor(s):** 俞建成 ; 张奇峰 ; 金文明

**Agent(s):** 沈阳科苑专利商标代理有限公司 21002; 白振宇

**7) Family number: 77735819 (WO20036540 A1)**

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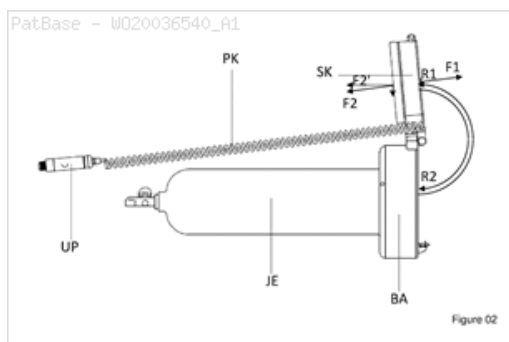
**Title:** AN UNDERWATER SCOOTER FOR DIVERS

**Abstract:** The present invention belongs to the field of equipment for living or working underwater, more precisely to the field of diving equipment, especially underwater propulsion vehicles for divers. The object of the invention is an underwater scooter for divers. The essence of the underwater scooter for divers is in that the thruster is placed above the scuba diving tank when used and below it when it is not used. The interchangeable battery pack is placed around the scuba dive tank. The thruster rotation between both positions is enabled by contact hinge which connects the thruster and the interchangeable battery pack. By holding the command joystick in his/her hand the diver is managing the device. There is a safety cord with karabiner snap hook attached to the command joystick which could be attached to the scuba diving inflated life jacket. Thus, the diver is able to steer the device hands-free.

**Classifications:**

**International (IPC 8-9):** A63B35/12 B63C11/00 B63C11/02

**CPC:** A63B35/12 B63C11/02 B63C2011/028



**Family:**

| Publication number   | Publication date | Application number   | Application date |
|----------------------|------------------|----------------------|------------------|
| SI25691 C            | 20200228         | SI20180000177        | 20180813         |
| <b>W020036540 A1</b> | <b>20200220</b>  | <b>W02019SI50014</b> | <b>20190805</b>  |

**Priority:**

SI20180000177 20180813

**Probable Assignee:** OCEANUS PODVODNA FOTOGRAFIJA ANDREJ VOJE S P

**Assignee(s):** (std): OCEANUS PODVODNA FOTOGRAFIJA ANDREJ VOJE S P

**Inventor(s):** (std): ANDREJ VOJE ; KUNC ROBERT ; ROBERT KUNC ; VOJE ANDREJ

**Agent(s):** PATENTNI BIRO AF DOO

**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 DJ 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 IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC 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 SA 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

**8) Family number: 74976781 (CN209064335 U)**

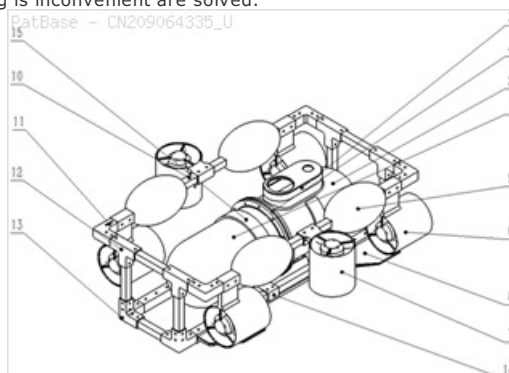
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**Title:** BRUSHLESS MOTOR UNDERWATER EQUIPMENT

**Abstract:** The utility model discloses an underwater device with a brushless motor. Waterproof cabin and rack, the rack comprises a square aluminum pipe, a right-angle connecting piece, a T-shaped connecting piece and a space right-angle connecting piece. the waterproof cabin comprises a waterproof cabin front cabin, a waterproof cabin rear cabin and a waterproof cabin cover; a first through hole and a second through hole are formed in the top of the waterproof cabin cover; longitudinal fairings are installed in the middles of the two sides of the rack, transverse fairings are installed on the surfaces of the two ends of the two sides of the rack, brushless motors are installed in the longitudinal fairings and the transverse fairings, and blades are installed at the output ends of the brushless motors through rotating shafts. Through the arrangement of the transverse fairing, the longitudinal fairing, the brushless motor, the blades, the rack and the waterproof cabin structure, the problems that practicability is not high and moving is inconvenient are solved.

**Classifications:**

**International (IPC 8-9):** B63C11/52



**Family:**

| Publication number   | Publication date | Application number     | Application date |
|----------------------|------------------|------------------------|------------------|
| <b>CN209064335 U</b> | <b>20190705</b>  | <b>CN201821720703U</b> | <b>20181023</b>  |

**Priority:**

CN201821720703U 20181023

**Probable Assignee:** LI CHEN

**Assignee(s):** (std): LI CHEN

**Assignee(s):** 李晨

**Inventor(s):** (std): HAO GANG ; HE MINGFEI ; LI CHEN

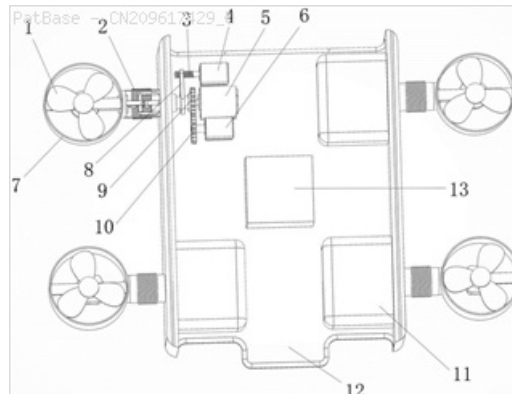
**Inventor(s):** 李晨 ; 贺明飞 ; 郝刚

**Title:** MULTI-ANGLE FULL-REVOLVING PROPELLER AND UNDERWATER ROBOT POWER DEVICE

**Abstract:** The utility model discloses a multi-angle full-revolving propeller and an underwater robot power device. Each independent propeller is composed of a propeller; the propeller is composed of a waterproof connector, a screw, a first steering engine, a motor, a second steering engine, a ducted propeller shell, a limiting bearing, a first straight gear, a second straight gear, a propeller protection cover, a driven sliding rod, a rotary support shaft, a universal joint, a steering engine transmission shaft, a first bevel gear, a second bevel gear, a second motor transmission shaft, a first motor transmission shaft, a steering transmission sliding rod, a first small slider and a second slider. The whole power device is composed of four identical propellers, an industrial personal computer and a frame. The propeller disclosed by the utility model can realize 360-degree full rotation within a certain angle range so as to realize multi-directional thrust output; according to the power device, the underwater robot can move in six degrees of freedom in space only through four propellers, the output efficiency is high, the control algorithm is simple, and on the premise that resources are saved, the maneuverability, stability and flexibility of the underwater robot are greatly improved.

**Classifications:**

**International (IPC 8-9):** B63C11/52 B63H21/17 B63H5/07



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN209617429 U      | 20191112         | CN201920391574U    | 20190326         |

**Priority:**

CN201920391574U 20190326

**Probable Assignee:** LIU CHAO

**Assignee(s):** (std): LIU ZHICHAO

**Assignee(s):** LIU CHAO ; 刘志超

**Inventor(s):** (std): JIANG NAN ; LEI SIQING ; LI BAO ; LIU ZHICHAO ; WANG XIN

**Inventor(s):** 刘志超 ; 姜楠 ; 李保 ; 王鑫 ; 雷思情

**Agent(s):** 大连东方专利代理有限责任公司 21212; 李馨

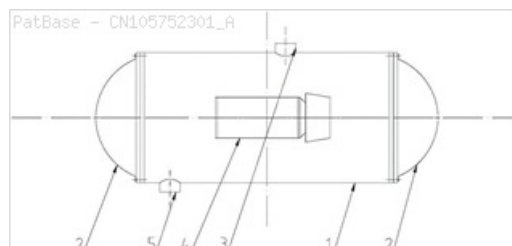
**Title:** SELF-INCLINATION SUBMERSING DEVICE

**Abstract:** The invention discloses a self-inclination submersing device. A submersing device body mainly comprises a pressure-resistant cabin, a depth sensor, an equipment mounting platform, a camera, a battery, a weight moving mechanism, underwater propellers which are connected to each other and the like, wherein the pressure-resistant cabin is composed of a front end cover, a rear end cover and a main cylinder; a navigation, imaging, communication, power and control system is formed. Propelling force of the propellers is controlled through the rotation speed of a motor, the inclination angle of the submersing device is controlled through the weight moving mechanism, so that distribution of propelling force on the horizontal face and the vertical face is completed, control over the navigation direction and the speed and ascending/descending changes of the submersing device are achieved, and the posture and the floating force of the submersing device are achieved through the pressure-resistant cabin and weight adjustment. The self-inclination submersing device is simple in structure, economical, portable, easy to popularize and suitable for various underwater detection, maintenance and inspection.

**Classifications:**

**International (IPC 8-9):** B63C11/52 B63G8/14 B63G8/26

**CPC:** B63C11/52 B63G8/14 B63G8/26



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN105752301 A      | 20160713         | CN201610104898     | 20160225         |

**Priority:**

CN201610104898 20160225

**Probable Assignee:** UNIV JIANGSU SCIENCE AND TECH

**Assignee(s):** (std): JIANGSU UNIV OF SCIENCE AND TECHNOLOGY ; UNIV JIANGSU SCIENCE AND TECH

**Assignee(s):** 江苏科技大学

**Inventor(s):** (std): KE LI ; LIU KEFENG ; SHEN WENFENG ; ZHENG YI ; ZOU XINYU

**Inventor(s):** 刘可峰 ; 柯力 ; 沈文锋 ; 邹心宇 ; 郑怡  
**Agent(s):** 南京苏高专利商标事务所(普通合伙) 32204; 张弛

**11) Family number: 71449820 (WO18185329 A1)** © PatBase

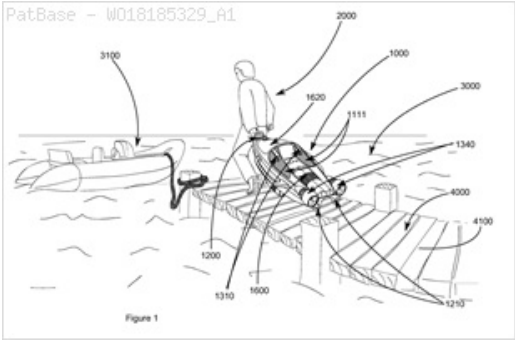
**Title:** UNDERWATER PROPULSION SYSTEM

**Abstract:** According to one aspect, the present invention relates to a propulsion system (1000) that is able to move at least one user (2000) around in an underwater environment and is configured to be entirely submerged at least during a phase of propelling the user (2000) in an underwater environment, said propulsion system (1000) comprising at least: • an outer wall; • a drive device (1310); • a propulsion device (1300); the propulsion system (1000) being characterized in that it also comprises: • a breathing supply device (1600); • a buoyancy device.

**Classifications:**

**International (IPC 8-9):** B63C11/46

**CPC:** B63C11/46 B63C2011/028



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| EP3606815 A1       | 20200212         | EP20180714552      | 20180406         |
| FR3064977 A1       | 20181012         | FR20170053006      | 20170406         |
| WO18185329 A1      | 20181011         | WO2018EP58940      | 20180406         |

**Priority:**

FR20170053006 20170406 WO2018EP58940 20180406

**Probable Assignee:** VISIT SEABED FRANCE

**Assignee(s):** (std): VISIT SEABED FRANCE

**Inventor(s):** (std): CASTELLANET FREDERIC

**Inventor(s):** FREDERIC CASTELLANET

**Agent(s):** CABINET HAUTIER; HAUTIER NICOLAS

**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 DJ 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 IR IS IT JO JP KE KG KH KM KN KP KR KW 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 SA 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

**12) Family number: 34399085 (CA2520973 AA)** © PatBase

**Title:** PULL AND GLIDING DEVICES AND PROTECTIVE JACKETS FOR HIGH- ALTITUDE FLIGHT, FLIGHT OVER WATER AND UNDERWATER DIVING

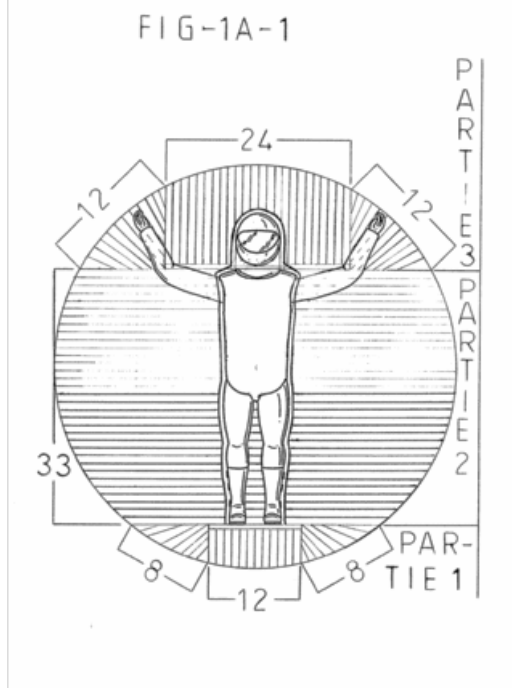
**Abstract:** Source: CA2520973 AA **Machine translation:** According to the main aspect of the invention,they describe as being the trains systems, yokes and envelopes or survies of protections for flies above the water,at different elevations,or EBP motte at the water surface as some species of birds do,o u to dive in surface water,in entering and exiting as some species of fish, dolphins and others, or by immersing in depth,a varying speeds while having fun with diferrentes living species of turtles, fish, or crutaces;seas,slowly to explore the wonders of the underwater depths.Its systems may sometimes inclues using a winch (kind of large fishing reel d e) to ensure a variable voltage and a partial or complete release,in case of colusion with any object inert or living.Se allows winch Of eloiger the user has the desired distance of the boat,so the IU make any animal coreographies they swallow, pelican, goelan:,seagull, Dauphin, epolard salmon,different,or,beaver cascades or non-survies the different games extreme.envelopes of deployed figures: (2 A, B and C, 6 and 7),are contained on the perimeter of the englo combination,it be all the corp,the vest and helmet cap (rigid),in case of emergency,they are inflated by the declanchement of mechanisms of compressed air, instantaneous manner as ca is carried out with the sauvetag jerseys es or canoes tires, they may be transformed according to the model used,as one of the following figures; (1 A, 1 B, 1 C, 3, 4 A and B, 5 A and B),they may be optionnelllements accompanied a Paragliding when they are used to heights greater than 80 feet.On the other protective shells or survies are monohulls,more rigid figure:(8, 9, 10 A-1, 2, 3, 4, 5 and 7, 10 B, 10 C, 11 A-1, 2, 3, 4 and 5, 11 B, 12 A-1, 2, 3, 4, and 5, 12, 13, 12 B-2 B-1 A-1, 2, 3, 4, 5 and 7, 13, 1 3 C-1, B 13 C-2, 14 to 14, A-2.1 and 2.2 and 1.2-1.1, 14 B, 14 C, 15 A-1, 2, 3, 4, 5 and 7, 15 B, 15 C-1 and C-2).The vest and helmet cap (rigid) protect vital all parties of the human corp.There are also mechanisms of trains and yokes,to allow the user To rotate on itself to 360 degrees and many other functions.

**Classifications:**

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