(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
31 January 2013 (31.01.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/015753 A1

(51) International Patent Classification:
F01D 1/22 (2006.01) *F03G 7/10* (2006.01)
F03B 17/00 (2006.01)

(21) International Application Number:
PCT/TR2011/000177

(22) International Filing Date:
25 July 2011 (25.07.2011)

(25) Filing Language: English

(26) Publication Language: English

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

WO 2013/015753 A1

(54) **Title**: HIGH EFFICIENT TURBINE TECHNOLOGIES

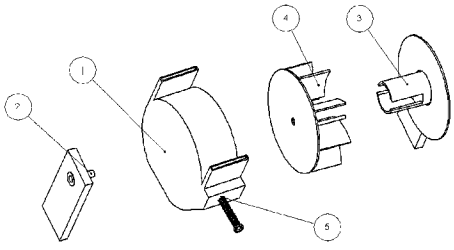

FIGURE-2

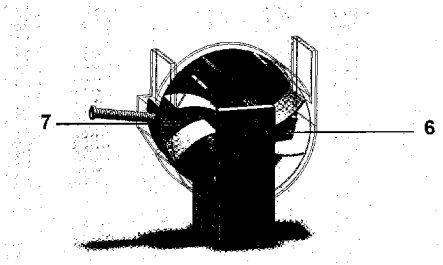

FIGURE-3

(57) **Abstract**: This invention is related with high-efficient turbine technologies used in producing mechanical energy and is composed of seven components. This invention is a mechanism diverting the inlet energy produced by pressurized dust, gas, air, and fluids into mechanical energy. This invention can be used in every related field.

INTRUCTION BOOK
HIGH EFFICIENT TURBINE TECHNLOGIES

This invention is related with high-efficient turbine technologies used in producing mechanical energy and is composed of seven components. As shown in Figure – 1, these components are the main body(1), a mechanical power shaft(2), an energy diversion shaft(3), blades(4), an adjustable outlet nozzle(5), a turning turbine inlet cell(6) and a turning turbine outlet cell(7).

This invention is a mechanism using repeatedly the input pressure generated by pressurized dust, gas, air and fluids and converting into high efficient mechanical energy. This invention can be used in every related field.

The operating principle of the invention is as such: The system transfers the pressurized power (dust, gas, air, and fluid) applied to the turning turbine inlet cell(6) via its energy diversion shaft(3) from the cells existing in the blades of the system(4) to the turning turbine outlet cell(7). This pressurized power in the turning turbine outlet cell(7) is transferred to the outside of the turbine through the adjustable outlet nozzle(5). During this process the pressurized power which is in the turning turbine inlet cell(6) is diverted into the mechanical energy and is directed through energy diversion shaft(3) just about 180^{o} opposite the application direction of input pressure power and because it is directed to the out of the turbine system via adjustable outlet nozzle(5), the power produced in the mechanical power shaft is doubled. The output power can be adjusted and equaled with the input power thanks to the adjustable outlet nozzle(5). Therefore the input power can be used repeatedly in the other systems by being taken to the outside of the turbine system via the adjustable outlet nozzle (5).

The turbine, when operated in a looped closed system which has equal input pressure and output pressure power doesn't need another external power source. That is, the output power can be looped preferably either in the same system or parallel and/or series connected other turbine systems.

Currently, there is no high efficiency turbine system which uses the input pressure power repeatedly and as an additional power. Current turbine technologies are based on the power generated by the blades being as much as the radius of the turbine. In this occasion, in order to take full advantage of input power it has to be done either by increasing the number or the lengths of the blades. While the input pressure is converted into mechanical energy in these systems, all the input power is wasted in current turbine systems. In this invention, since the input pressure power is used twice both in the full diameter of

the turbine and in the 180° opposite the application direction of input pressure power, the input pressure power is converted into twice as much as mechanical output power in the mechanical power shaft(2). Because the input pressure power is taken advantage by being used once again in the 180° opposite the application direction of input pressure power by the energy diversion shaft(3), the power produced in the mechanical power shaft(3) is doubled and taken out of the turbine system in order to be used repeatedly in other systems.

The differences of this invention from the current technologies are the cost of production and time, the variety of usage and the capacity of the power produced by turbines compared with other available technologies and this invention provides much better benefits and advantages than current other available technologies. Thanks to these features, this invention can be used in every field of industry and energy production.

High Efficiency Turbine Component List

1. Main Body
2. Mechanical Power Shaft
3. Energy Diversion Shaft
4. Blades
5. Adjustable Outlet Nozzle
6. Turning Turbine Input Cell
7. Turning Turbine Output Cell

CLAIMS

1 – This invention is related with high efficient turbine technologies and composed of a main body(1), a mechanical power shaft(2), an energy diversion shaft(3), blades(4), an adjustable outlet nozzle(5), a turning turbine inlet cell(6) and a turning turbine outlet cell(7).

2 – According to the Claim – 1, it is a high-efficient turbine technology; transfers the input pressure power applied to the turning turbine input cell(6) by diverting via the energy diversion shaft(3) and to the turning turbine output cell(7) in order to be used once again.

3 – According to the Claim – 1, it is a high-efficient turbine technology; uses the input pressure power once again through the energy diversion shaft(3) in the turning turbine output cell(7) in the 180° opposite the application direction of input pressure power.

4 – According to the Claim – 1, it is a high-efficient turbine technology; the output power can be looped preferably either in the same system or parallel and/or series connected other turbine systems.

5 – According to the Claim – 1, it is a high-efficient turbine technology; the input pressure power is used twice both in the full diameter of the turbine and in the 180° opposite the application direction of input pressure power, the input pressure power is converted into twice as much as mechanical output power in the mechanical power shaft(2).

6 – According to the Claim – 1, it is a high efficiency turbine technology; the output pressure power can be adjusted and equaled with respect to input pressure power via adjustable outlet nozzle(5).

7 – According to the Claim – 6, it is a high efficiency turbine technology; the input power can be used repeatedly in the other systems by being taken to the outside of the turbine system almost without loss via the adjustable outlet nozzle(5).

8 – According to the Claim – 6, it is a high efficiency turbine technology; the turbine, when operated in a looped closed system which has equal input pressure and output pressure power doesn't need another external power source.

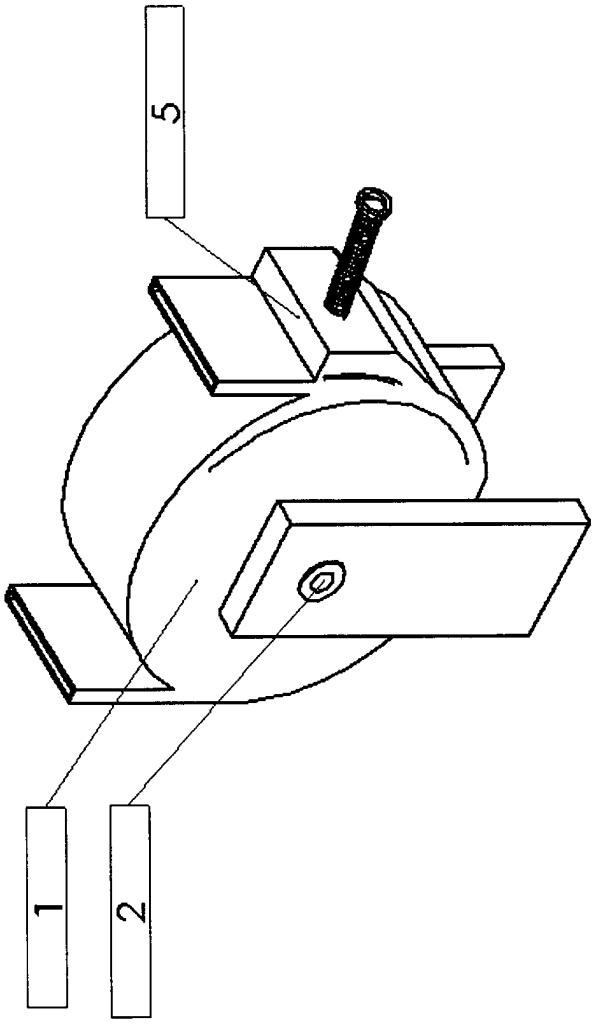

FIGURE-1

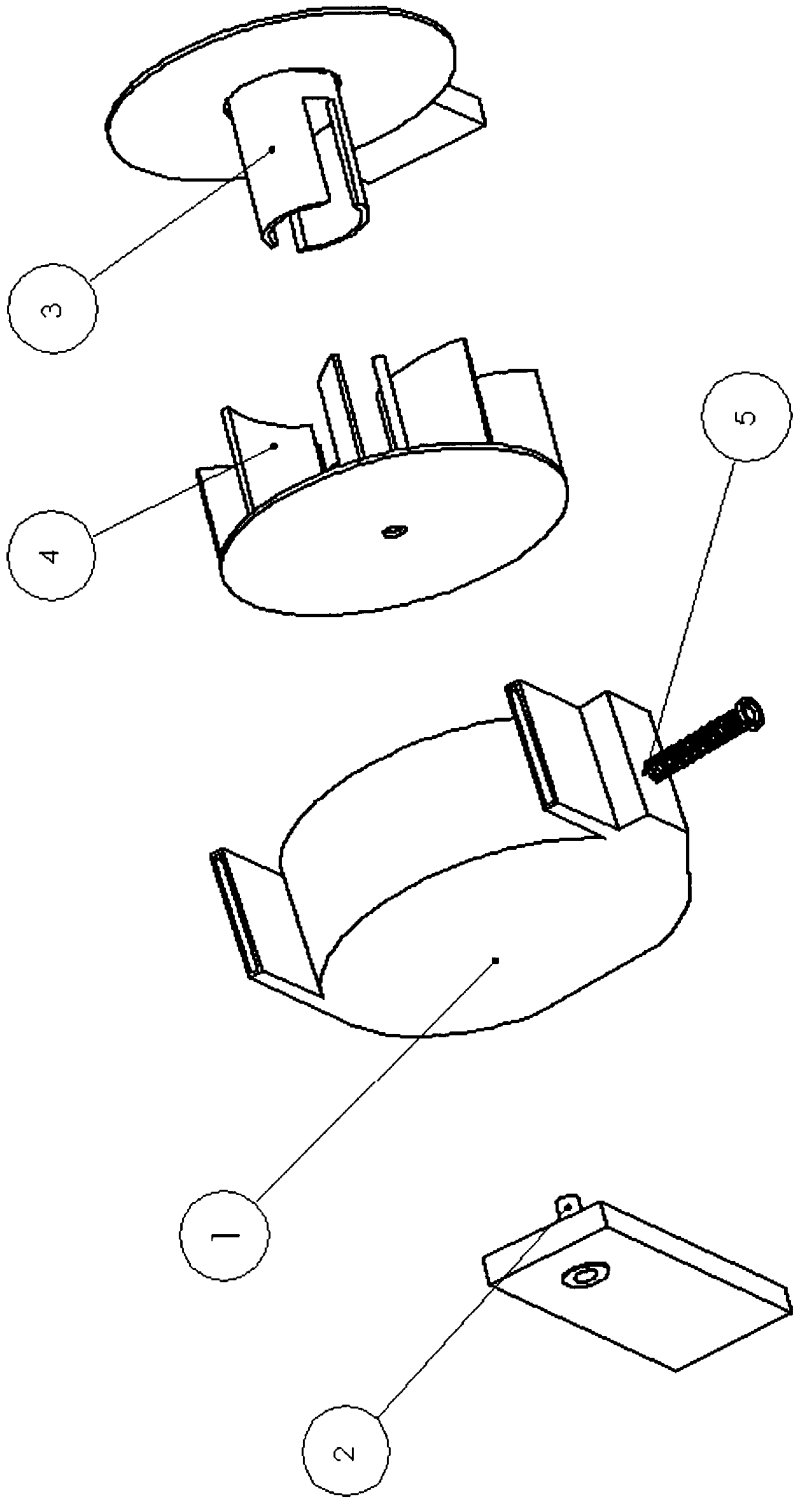

FIGURE-2

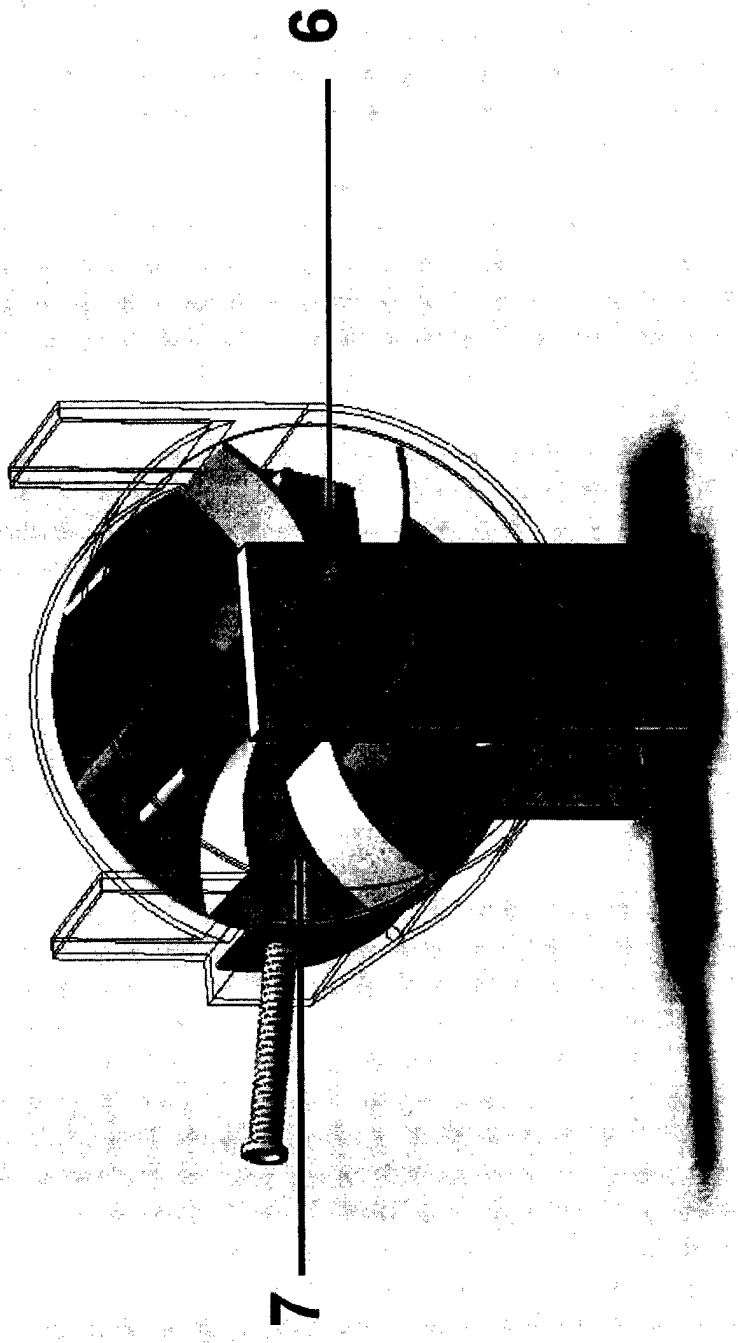

FIGURE-3

INTERNATIONAL SEARCH REPORT

International application No
PCT/TR2011/000177

A. CLASSIFICATION OF SUBJECT MATTER
INV. F01D1/22 F03B17/00 F03G7/10
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
F01D F03B F03G F03D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 10 205301 A (UNYUSHO KOWAN GIJUTSU KENKYUSH) 4 August 1998 (1998-08-04) abstract; figures	1-8
A	WO 2006/085130 A1 (SIRIN YEKTA [TR]) 17 August 2006 (2006-08-17) the whole document	1,2,4,7, 8
A	US 2010/176597 A1 (HARRIS CHRISTOPHER H [US]) 15 July 2010 (2010-07-15) paragraph [0014] paragraph [0016] paragraph [0019] figures 1,2	1,3-5,7, 8
A	US 2005/212298 A1 (YEH MING-SHYUAN [TW]) 29 September 2005 (2005-09-29) paragraph [0006]	1,2,8

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
26 March 2012	02/04/2012

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/TR2011/000177

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