

PATENT COOPERATION TREATY

From the
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43*bis*.1)

To:

see form PCT/ISA/220

Date of mailing
(*day/month/year*) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/RS2017/000012

International filing date (*day/month/year*)
13.11.2017

Priority date (*day/month/year*)
14.11.2016

International Patent Classification (IPC) or both national classification and IPC
INV. F03D9/00 F03D9/41 F03D9/37

Applicant
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1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of
this opinion

see form
PCT/ISA/210

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed.
 - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
 - on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).
4. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-12</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	<u>1-12</u>
	No: Claims	
Industrial applicability (IA)	Yes: Claims	<u>1-12</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

- D1 WO 2012/014241 A2 (SAIM) 2 February 2012
- D2 US 2010/199668 A1 (COUSTOU) 12 August 2010
- D3 US 4 018 543 A (CARSON) 19 April 1977
- D4 US 2008/292456 A1 (RAYNAL) 27 November 2008

2 The present application appears to meet the requirements of Article 33(1) PCT.

2.1 D1 is regarded as being the prior art closest to the subject-matter of claim 1 and discloses (the references in parentheses applying to this document): a solar windmill (Figs. 1 and 14) consists of a collector (2), a chimney (7), in which structure belongs the rotor (12) of wind turbine and electric generator (12), and a cap (9), wherein on the top of the upper cylindrical part of the chimney (7), the cap (9) is placed, which stands on a spinning magnetic axial bearing (21 in Fig. 23), which hold the cap connected to the chimney, in a way that it can rotate around vertical axes of the chimney, toward the wind, in the same way as the weather vanes (Figs. 1, 14, and 23).

3 The subject-matter of claim 1 therefore differs from this known solar windmill by the following features:

The collector consists of an upper central glass part and a lower peripheral transparent plastic part; the upper part of the collector consists of a minimum of four sectors; an inner cylindrical opening passes through the centre of the upper part by the entire height of the upper part; the lower part, of the collector consists of a minimum of four transparent sectors whereby the transparent sectors of the lower part, aligned mutually form a cylinder with an inner cylindrical opening in the centre, which passes through the entire height of the lower part; every transparent sector, of the collector, is covered with transparent roof planes, made from the plastic materials, which can rotate partially around axes; the transparent roof planes are standing on partition

walls, which stand on striped fundament and with thermo accumulating slopes, form sectors; furthermore away from transparent sectors, there are channels in form of the spiral intake, bordered with thermo accumulating spiral walls; the steel construction of the upper glass part consists of at least four segments in extension of transparent sectors, where every segment has its own pylon, which stands on its own fundament, while pylons all together support sloped bearings, and a carrying ring, on which the entire chimney stands, with the cap; the rotor of the windmill consists of at least six or more arched segments with blades, mounted on the arched segmented tracks which placed all together form circle, where on each segment of the rotor from bottom side the toothed arch lath is attached which all together form a circle; all arch segments of the rotor together and connected on tracks form an endless circular rotor which rotates on arched segmented tracks while from the bottom side it carries the toothed arch lath which rotates together with rotor; the toothed arch lath, transfers round motion from the rotor to the mechanism of rotational transmission, which transmits rotational motion to electric generator; inside the lower cylindrical part, below the conical part, of the chimney there is a partially placed rotor, in a way that inner diameter of rotor equal to outer diameter of upper cylindrical part, of the chimney, and outer diameter of the rotor is equal to inner diameter of the lower cylindrical part of the chimney; the cap stands on a spinning electromagnetic axial bearing.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

- 4 The problem to be solved by the present invention may be regarded as providing an efficient solar windmill.
- 5 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: There is no hint in D1 that would lead the skilled person in an obvious manner to the claimed subject-matter. Even though some of the features are known, see e.g. D2 (Fig. 1 and § 0048) for rotatable roof segments and D3 (Fig. 1) for spiral walls, the skilled person would not apply all the claimed features in combination without having prior knowledge of the present invention.
- 6 Claims 2-12 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Re Item VIII

Certain observations on the international application

- 7 The present application does not meet the requirements of Article 6 PCT:
- 7.1 Expressions in parentheses, as far as they are not reference signs, render the claimed subject-matter unclear, see claim 1 (page 20, lines 17, 24, 25, and 26) and claim 5 (page 21, line 26; page 22, line 1). The text "not particularly marked on [the] drawings" should have been deleted, whereas for the other expressions, it would have been enough to only delete the parentheses rather than also the text.
- 7.2 The expression "extensions" (see claim 1, page 21, line 8) should have read "telescopic extensions" in order to be consistent with the terminology used in claim 4 (page 21, line 23).
- 7.3 There is no sufficient antecedent basis for the feature "the cabin (46)" (see claim 4, page 21, line 23).
- 7.4 The reference sign "26" (see claim 5, page 22, line 2) should have read "30" in order to be consistent with the drawings/description.
- 7.5 The expression "an outer layer (38) and/or (39)" (see claim 9, page 22, line 20) should have read "a first outer layer (38) and/or a second outer layer (39)" in order to provide a sufficient antecedent basis for the first/second outer layer mentioned later in claim 9 (page 22, lines 20-21).