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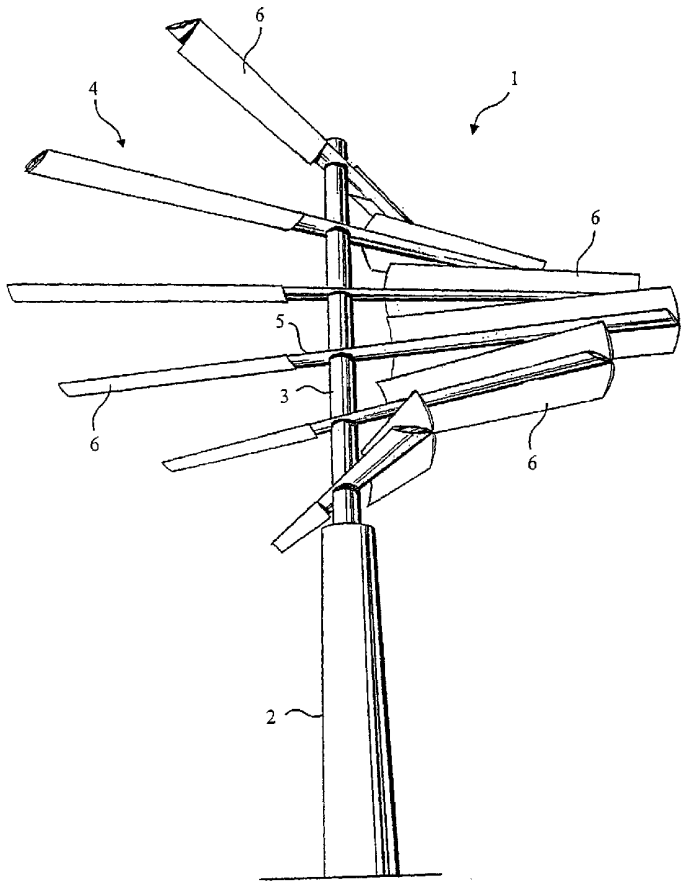
[Continued on next page]

(54) Title: VERTICAL-AXIS WIND TURBINE



(57) Abstract: The vertical axis wind turbine (1) consists of a vertical axis (3) placed on the supporting structure (2) and a plurality of blade assemblies (4) connected horizontally in a descending order, i.e. from the top to the bottom to said vertical axis (3). The vertical axis (3) rotates around its axis and transmits this rotary motion to such devices as a generator, a motor, a pump and the like, that convert said rotary motion to other types of energy. The blade assembly (4) consists of a support arm (5) and the upper and lower blades (6) connected to said support arm (5) by means of a hinge (15). A blade assembly (4) is placed with its hinged (15) edge at the reverse side, at the opposing side of one blade assembly (4) with respect to the vertical axis (3).

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/TR 01/00053

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F03D3/06 F03D7/06 F03D3/00

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)
IPC 7 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.
X	WO 84 04362 A (VARI GYULA) 8 November 1984 (1984-11-08)	1,2,5
Y	abstract page 10, line 6 - line 15; figures 2,5 page 7, line 30 -page 9, line 22	3,4
X	ES 275 347 U (D. JOSE LUIS RODRIGUEZ MACEDA) 16 April 1984 (1984-04-16)	1,6
Y	figure 2 page 3, line 24 -page 4, line 8	3,4
X	US 2 441 635 A (IVERSON HENRY V) 18 May 1948 (1948-05-18)	1
Y	figures 1-3 column 2, line 3 -column 3, line 32	3,4
X	US 665 891 A (FRANKLIN L. FETTY) figures 1-4	1,2

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
1 March 2002	06.06.02

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Pinna, S

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International Application No
PCT/TR 01/00053

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96 34197 A (COMPANIA DE NUEVAS TECNOLOGIAS ;ESPEJO HEREDIA FRANCISCO (ES)) 31 October 1996 (1996-10-31) the whole document	1-6

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/TR 01/00053

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-6

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-6

   A vertical-axis wind turbine where the blades are symmetrically attached to a support arm by hinges and where the blades, at the side receiving the wind against their front face are entirely opened by the wind while at the other side they are closed over the support arm.

2. Claim : 7

   A vertical axis wind turbine comprising a support structure and a frame, where the blades are connected to said frame by means of their upper edges, while the lower edges of the blades are free to move only at one face of the frame and they are not allowed to pass to the other side of the frame.

INTERNATIONAL SEARCH REPORT

ormation on patent family members

International Application No
PCT/TR 01/00053

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 8404362 A	08-11-1984	EP 0150188 A1	07-08-1985
		WO 8404362 A1	08-11-1984
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US 665891 A		NONE	
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		AU 5502496 A	18-11-1996
		WO 9634197 A1	31-10-1996