MECHANICAL ENERGY STORAGE AND RELEASE DEVICE

Abstract: A mechanical energy storage and release device comprises wound energy storage element (1), an arbor (2), a casing (3) and a means of charging. The energy storage element (1) is connected at one end to the arbor and at another to the casing (3). The energy storage element (1) is wound helically layer by layer with each layer connected to the other at one end thus leading to a high energy density and mechanical efficiency configuration, since a larger number of turns can be accommodated in the system. One of the applications of the device is as a rechargeable battery. The electrical generator (9) connected to the output end of the configuration produces electric energy by the virtue of the drive from the wound energy storage element (1).

Declarations under Rule 4.17:
- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:
- of inventorship (Rule 4.17(iv))
- with international search report

(88) Date of publication of the international search report: 27 April 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
### INTERNATIONAL SEARCH REPORT

**International application No.**
**PCT/IN 2005/000167**

#### A. CLASSIFICATION OF SUBJECT MATTER

**IPC**: F03G 1/02

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**: F03G

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 practicable, search terms used)

EPOQUE Fulltext, WPI, PAJ

#### C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<tr>
<td>X</td>
<td>US 5,880,532 A (STOPHER); 9 March 1999 (09.03.1999) column 4, line 18 - column 5, line 61. figures 2-4.</td>
<td>1-3, 6-11, 13-31</td>
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<td>A</td>
<td>US 5,590,741 A (STORMS); 7 January 1997 (07.01.1997) column 2, line 25 - column 4, line 40, figures 1-4.</td>
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☐ Further documents are listed in the continuation of Box C.  ☒ See patent family annex.

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Date of the actual completion of the international search 2 December 2005 (02.12.2005)

Date of mailing of the international search report 20 December 2005 (20.12.2005)

Name and mailing address of the ISA/AT

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<tr>
<td>US A 20040007427</td>
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