Title: CELLULOSIC FIBERS HAVING ENHANCED REVERSIBLE THERMAL PROPERTIES AND METHODS OF FORMING THEREOF

Abstract: Cellulosic fibers having enhanced reversible thermal properties and methods of forming such cellulosic fibers are described. In one embodiment, a cellulosic fiber includes a fiber body formed of an elongated member. The elongated member includes a cellulosic material and a temperature regulating material dispersed within the cellulosic material. The temperature regulating material includes a phase change material having a transition temperature in the range of -5°C to 125°C. The cellulosic fiber can be formed via a solution spinning process and can be used in various products where thermal regulating properties are desired. For example, the cellulosic fiber can be used in textiles, apparel, footwear, medical products, containers and packagings, buildings, appliances, and other products.
**INTERNATIONAL SEARCH REPORT**

A. **CLASSIFICATION OF SUBJECT MATTER**
   - IPC: D06G 3/00(2006.01); D04H 1/00(2006.01)
   - US CL: 428/373, 442/361

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

B. **DOCUMENTS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)
   - U.S.: 428/373, 442/361

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

Electronic data was consulted during the international search (name of data base and, where practicable, search terms used)

C. **DOCUMENTS CONSIDERED TO BE RELEVANT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>US 5,153,906 (Tuanne et al) 06 October 1992 (6.10.1992), see entire document.</td>
<td>1-72</td>
</tr>
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</table>

D. **Further documents are listed in the continuation of Box C.**

E. **See patent family annex.**

F. **Date of the actual completion of the international search**
   - 13 November 2005 (3.11.2005)

G. **Date of mailing of the international search report**
   - 09 JAN 2006

H. **Name and mailing address of the ISA/US**
   - Mail Stop PCT, Attn: ISA/US Commissioner for Patents
   - P.O. Box 1450
   - Alexandria, Virginia 22313-1450

I. **Fax number**
   - (371) 272-3201

J. **Form PCT/ISA/210 (second sheet) (April 2005)**