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(71) Applicant (for all designated States except US): **GENERAL MOTORS GLOBAL TECHNOLOGY OPERATIONS, INC.** [US/US]; LEGAL STAFF - MAIL CODE 482-C23-B21, P.o. Box 300, Detroit, Michigan 48265-3000 (US).

(72) Inventors: **BROWNE, Alan, L.**; 7 Woodland Place, Grosse Pointe, Michigan 48230 (US). **JOHNSON, Nancy, L.**; 22130 Heatheridge Lane, Northville, MI 48167 (US). **SEARS, Ivan, G.**; 241 Tanglewood Drive, Rochester Hills, MI 48309-2215 (US).

(74) Agent: **MARRA, Kathryn, A.**; GENERAL MOTORS GLOBAL TECHNOLOGY OPERATIONS, INC., LEGAL STAFF - MAIL CODE 482-C23-B21, P.o. Box 300, Detroit, Michigan 48265-3000 (US).

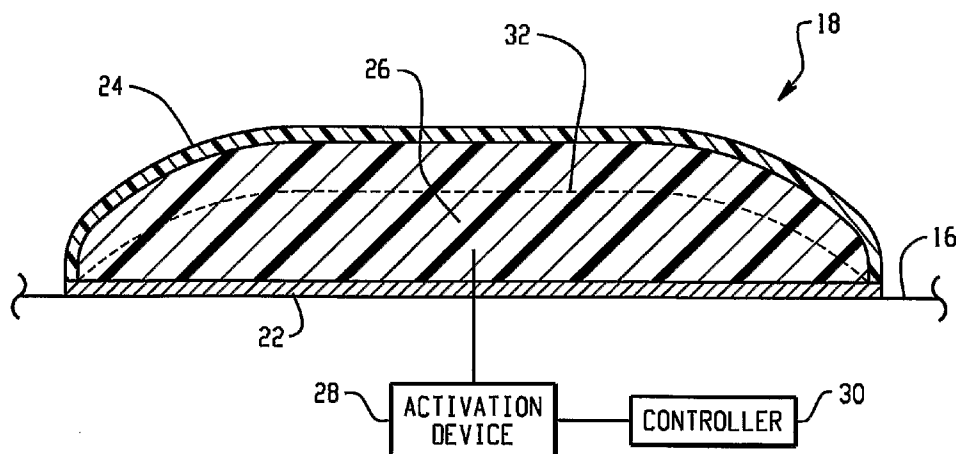
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(54) Title: ON DEMAND MORPHABLE AUTOMOTIVE BODY MOLDINGS AND SURFACES



(57) Abstract: A morphable vehicle member utilizing at least one active material to change at least one attribute in response to an activation signal. The change in at least one attribute is a change in a shape dimension, a shape orientation, an expansion, a contraction, a morphing, a yield strength property, a flexural modulus or a combination. Preferably, the change in at least one attribute in the morphable vehicle member is reversible. Also disclosed herein are methods for the morphable vehicle member utilizing at least one active material to change at least one attribute on demand in response to an activation signal.



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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/05906

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8): B60J 10/08 (2007.01)

USPC: 296/146.9

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)

USPC: 296/146.9

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

USPC: 143/563; 180/89.1; 293/128; 296/146.4; 428/412 - text word limited - see below

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

PubWEST (USPT, PGPB, EPO, JPO);

Search Terms: vehicle and (door or trunk or bumper or trunk) same (shape adj1 memory adj1 alloy)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/0031301 A1 (DOMINIQUE) 19 February 2004 (19.02.2004), entire document, especially paragraphs 0042-0051	1-20
A,P	US 7,029,056 B2 (BROWNE et al) 18 April 2006 (18.04.2006), abstract	1
A,P	US 2005/0202248A1 (BROWNE et al) 15 September 2005 (15.09.2005), abstract	1
A	US 6,390,878 B1 (ZHOU et al) 21 May 2002 (21.05.2002), abstract	1

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Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300

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