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(54) Title: CRASH SURVIVABLE MEMORY UNIT

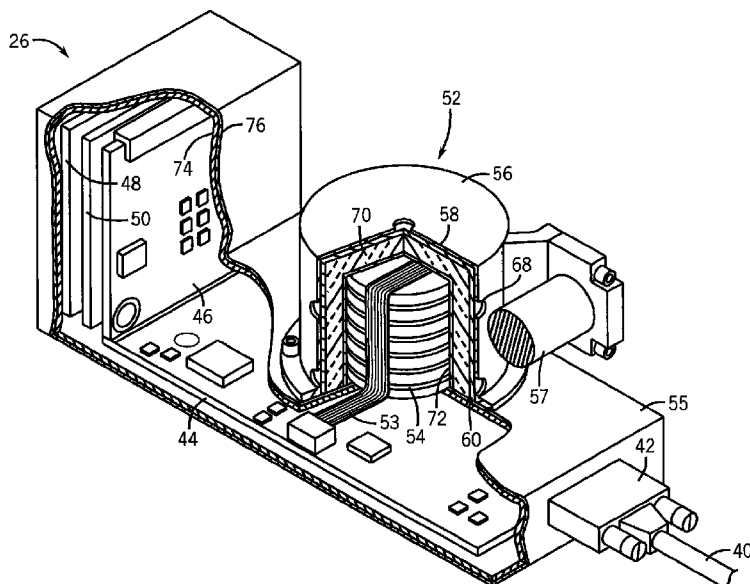


FIG. 3

(57) Abstract: A flight recorder includes an information input device, heat sensitive memory device electrically connected to the information input device, and housing enclosing the heat sensitive memory device. The housing is made with a first material and having a plurality of openings made through the housing. A sacrificial material is disposed between the housing and heat sensitive memory device. The sacrificial material having a lower melting temperature than the first material such that the sacrificial material changes state and egresses through the openings in the housing when exposed to heat to create an air gap between the housing and heat sensitive memory device. The first material includes nickel and the sacrificial material includes aluminum. A heat insulating layer is disposed between the sacrificial material and heat sensitive memory device. A second sacrificial material is disposed between the heat insulating layer and heat sensitive memory device.

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**A. CLASSIFICATION OF SUBJECT MATTER*****B64D 47/00(2006.01)i, H05K 5/06(2006.01)i***

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)

B64D 47/00; B23P 3/00; B28B 1/50; B61O 39/03; C08G 63/00; E05G 1/00; E05G 1/024

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

Korean utility models and applications for utility models since 1975.

Japanese utility models and applications for utility models since 1975.

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

eKOMPASS(KIPO internal) &amp; Keywords: fire proof, fire resistance, latent, phase change, memory, insulation

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6153720 A (OLZAK; RICHARD A. et al.) 28 November 2000 See column 3, line 13 - column 6, line 16; claims 1-23 and figures 1-3.	1,2,4-5,6-7,9-10 ,11-13,15-16,17-19 ,21-22
Y		3,8,14,20
Y	US 4574454 A (DYSON; GEORGE W.) 11 March 1986 See column 2, lines 39 - 65; claim 1 and figures 1-4.	3,8,14,20
A	EP 1746238 A2 (GUNNEBO AB) 24 January 2007 See paragraphs 32 - 43; claim 1 and figures 1-3.	1-22
A	US 4893397 A (HUGHES; JOHN T.) 16 January 1990 See column 4, lines 10 - 29; claim 1 and figures 3-5.	1-22

 Further documents are listed in the continuation of Box C. See patent family annex.

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"&amp;" document member of the same patent family

Date of the actual completion of the international search

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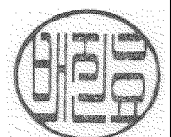
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Information on patent family members

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