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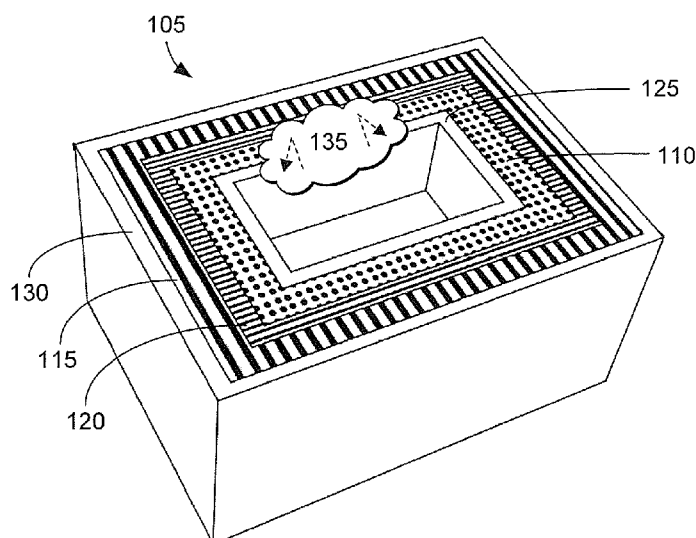
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(54) Title: NOISE DAMPENING ENERGY EFFICIENT ENCLOSURE, BULKHEAD AND BOOT MATERIAL

FIG. 1C



(57) Abstract: A noise dampening enclosure includes a first insulating layer, a second insulating layer, a carbon material layer disposed between the first and second insulating layers, a metal shield layer disposed between the first and second, insulating layers, and a third insulating layer disposed between the carbon material layer and the metal shield layer. The carbon material layer can include resin-impregnated woven carbon fiber fabric. Strands of the carbon material can be orientated in various configurations, including layering the strands at different angles. Noise dampening bulkhead material provides additional shielding between circuit boards or other electronic components contained within the enclosure. In addition, a noise dampening boot can be placed over cable connections and assemblies to decrease the influences of unwanted electromagnetic noise.



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A. CLASSIFICATION OF SUBJECT MATTER***H05K 9/00(2006.01)i, B32B 27/08(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)

H05K 9/00; C23C 14/00; B32B 3/24; B32B 15/00; B32B 3/10; B32B 7/00; H01R 9/05

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

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords:electromagnetic,noise,layer,film,dampening,carbon,metal,resin,interference

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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A	US 05539148 A (KONISHI, YOSHIHIRO et al.) 23 July 1996 see column 6, lines 1-11; claims 1, 6 and figure 2.	1-19
A	US 05401901 A (GERRY, MICHAEL et al.) 28 March 1995 see column 2, line 67 - column 3, line 25; claim 1 and figures 1-3.	1-19
A	US 2009-0104405 A1 (PATTEN CHARLES B. et al.) 23 April 2009 see paragraphs [0011]-[0013]; claim 1 and figures 1, 2.	1-19
A	US 2006-0083948 A1 (TOSHIYUKI KAWAGUCHI et al.) 20 April 2006 see paragraphs [0164],[0165],[0172]; claim 1 and figures 14, 15.	1-19
A	US 2007-0293086 A1 (LIANG LIU et al.) 20 December 2007 see paragraphs [0020]-[0025]; claim 1 and figures 1, 2.	1-19



Further documents are listed in the continuation of Box C.



See patent family annex.

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