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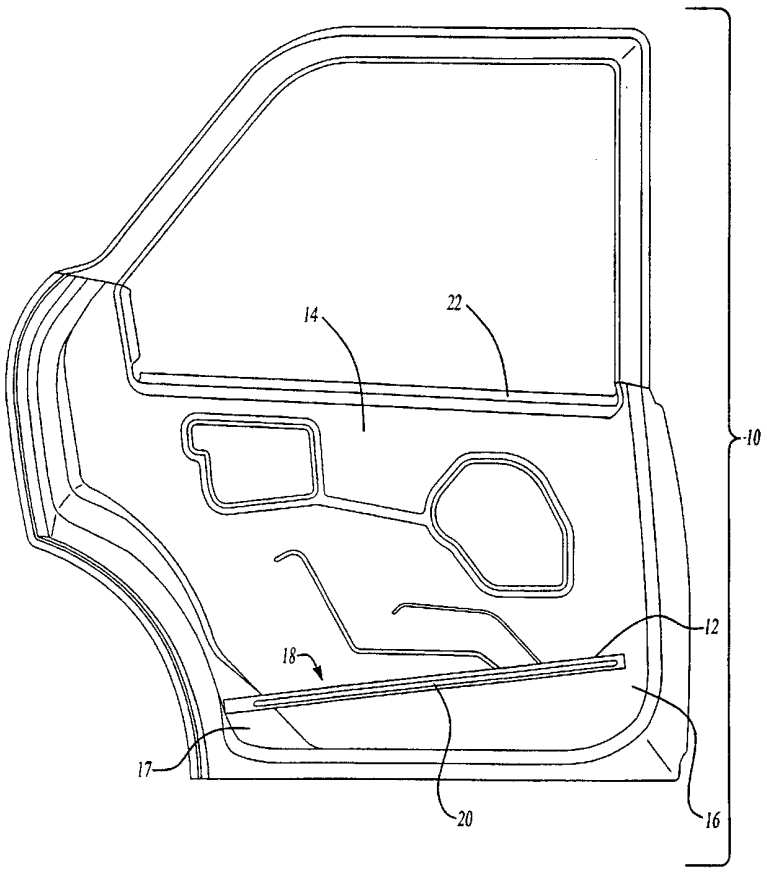
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(54) Title: VIBRATIONAL REDUCTION SYSTEM FOR AUTOMOTIVE VEHICLES



(57) Abstract: A vibration reduction and damping system for use in automotive closure panels, such as a door frame assembly (10) comprising an intrusion device (12) and an expandable material (20), such as a polymer-based foam, disposed along at least a surface of the intrusion device (12) prior to final assembly of the vehicle by the vehicle manufacturer. The system is activated as the vehicle undergoes the final vehicle assembly process, which activates and transforms the expandable material, preferably during an automobile paint operation, to expand, bond and fill the door assembly structure for vibrational damping and noise reduction.

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INTERNATIONAL SEARCH REPORT

Inte onal Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B60R13/08 B60R13/02 B60J5/04

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 7 B60R B60J

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 practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 213 391 A (TAKAGI MASAHIRO) 25 May 1993 (1993-05-25)	1,2,4-31
A	column 2, line 18 - line 31 column 3, line 6 - line 23; figures 7,9 abstract	3

Y	US 5 755 486 A (WYCECH JOSEPH S) 26 May 1998 (1998-05-26) cited in the application	1,2,4-31
A	column 2, line 27 - line 38 column 4, line 9 - line 19; figures 6,7 abstract	3

A	EP 0 236 291 A (AUSTRIA METALL) 9 September 1987 (1987-09-09) abstract; figures 4-9	1-31

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
22 February 2002	04/03/2002

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Wauters, J

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Inte ional Application No
PCT/US 01/24750

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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information on patent family members

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