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(12) **United States Patent**
De Gaillard

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(54) **MODULAR AUTOMOBILE ROOF**

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(2), (4) **Date:** Dec. 4, 2002

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B60J 7/00 (2006.01)

(52) **U.S. Cl.** 296/216.01; 296/216.04;
296/193.04; 296/210

(58) **Field of Classification Search** 296/216.01,
296/197, 210, 193.03, 193.04, 102, 211, 215,
296/216.02, 178, 216.04
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D155,614 S * 10/1949 Klein et al. 296/210
2,921,814 A * 1/1960 Mede 296/215

5,540,478 A 7/1996 Schüch
5,599,059 A * 2/1997 Shann 280/748
6,056,352 A * 5/2000 Ewing et al. 296/214
6,340,204 B1 * 1/2002 Seifert 296/216.07
6,502,895 B1 * 1/2003 Taylor 296/178
6,682,132 B1 * 1/2004 Hahn 296/215

FOREIGN PATENT DOCUMENTS

BE 524303 * 3/1956 296/216.02
BE 533581 * 5/1958 296/216.02
CH 133974 * 9/1929 296/216.02
DE 3429880 * 2/1986 296/197
DE 3725807 * 2/1988 296/210
DE 4024837 * 2/1992 296/210
DE 296 01 330 U1 6/1996
FR 1329277 * 4/1963 296/210
GB 386150 * 1/1933 296/216.02
GB 405430 * 2/1934 296/178
GB 2 184 404 A 6/1987
IT 484533 * 9/1953 296/178
WO WO 00/29234 * 5/2000

* cited by examiner

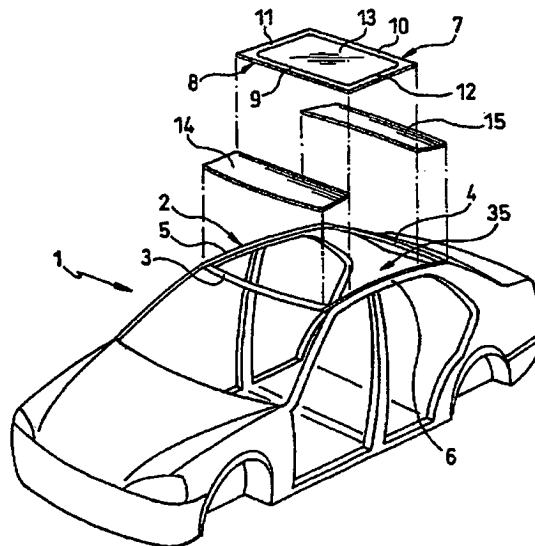
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(57) **ABSTRACT**

A modular roof of an automobile (1) comprising a bodyshell roof structure (2) which has a front and rear transverse member (3 or 4) and a right and left side member (5 or 6). The modular roof has at least two modular roof elements (7, 14, 15) which are fixed directly to the roof structure (2). The modular roof elements (7, 14, 15), which extend over the entire breadth of the roof structure, are preferably fixed, especially releasably fixed, to the side members (5, 6) which lie opposite each other.

15 Claims, 5 Drawing Sheets



UUSI, LLC
Exhibit 2017

WEBASTO ROOF
SYSTEMS, INC.

Petitioner

v.

UUSI, LLC
Patent Owner

Case:
IPR2014-00649
Patent: 7,548,037



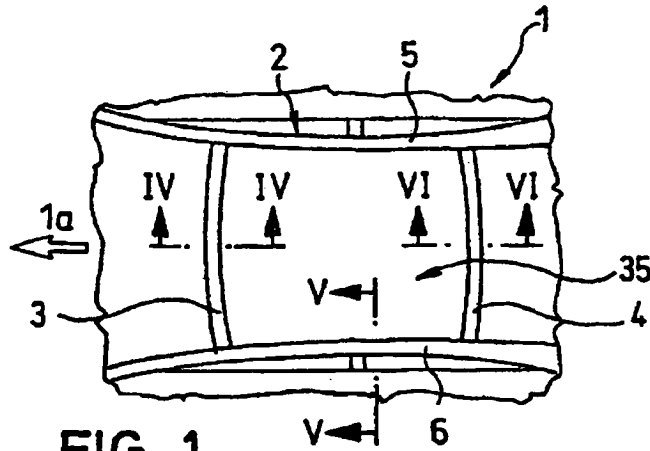


FIG. 1

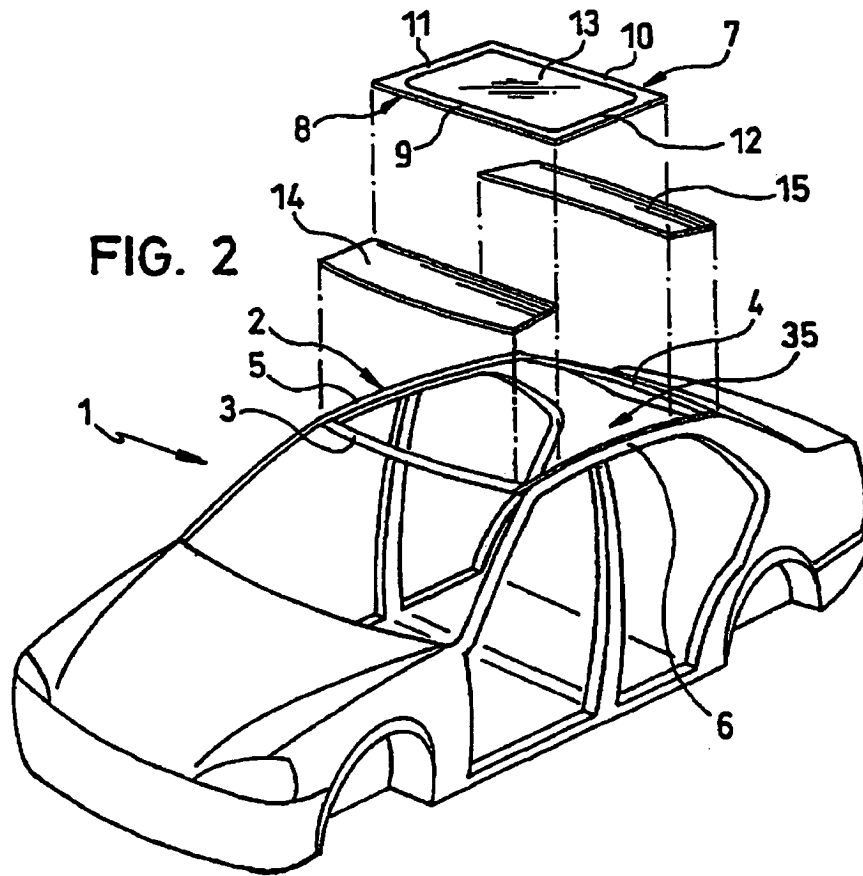


FIG. 2

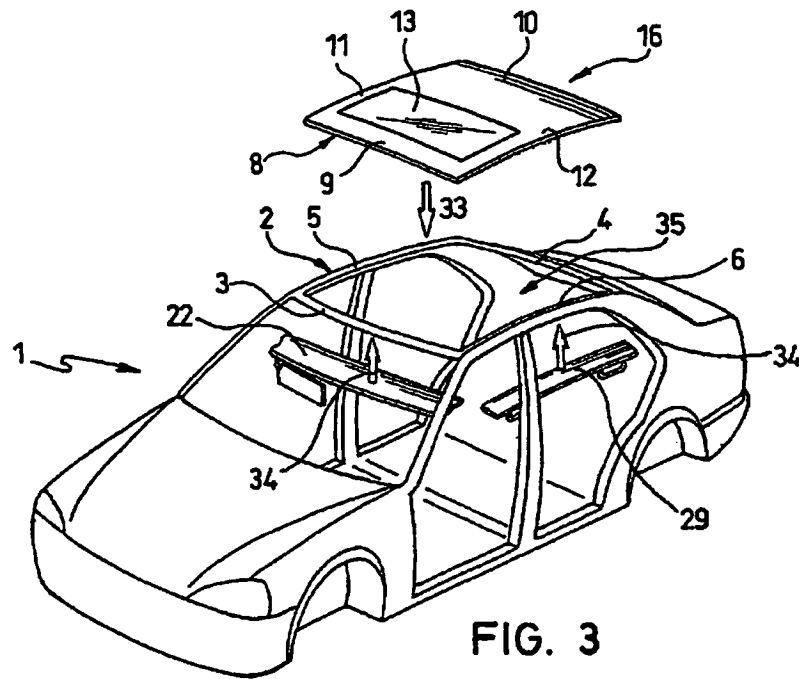


FIG. 3

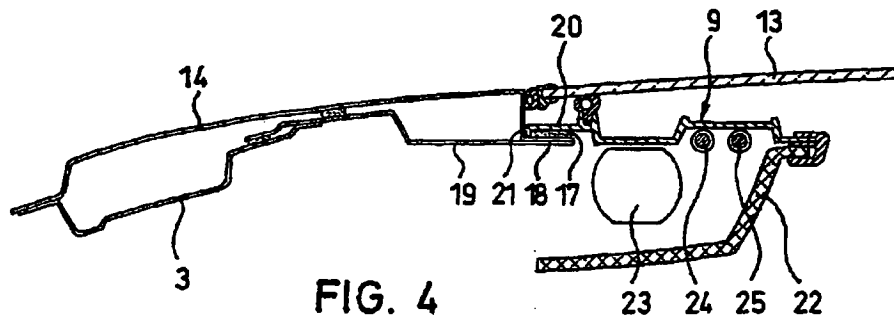


FIG. 4

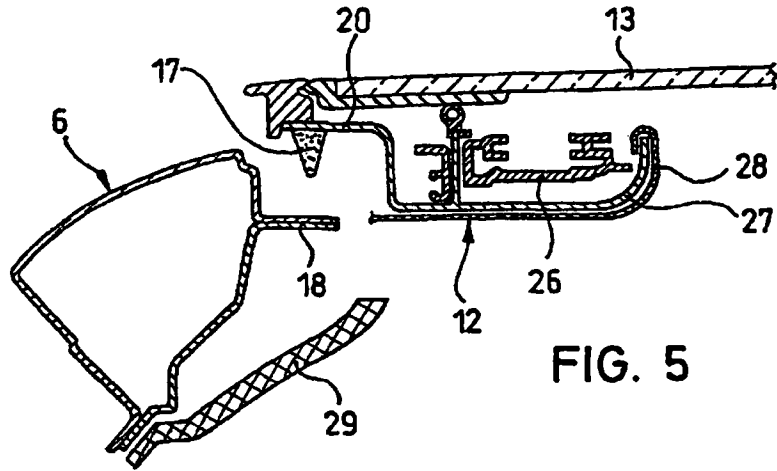


FIG. 5

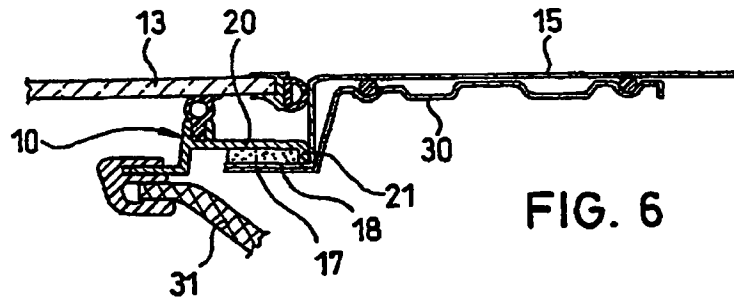


FIG. 6

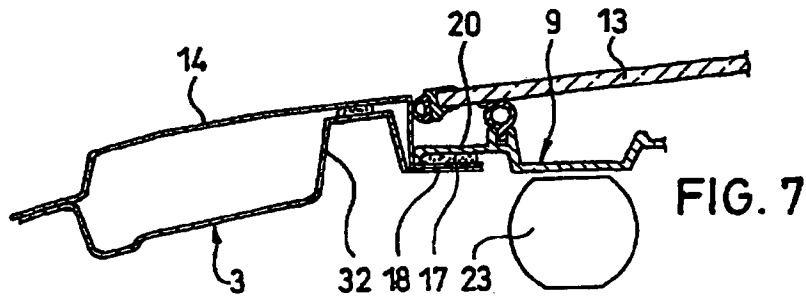
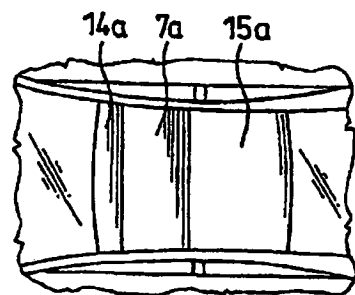
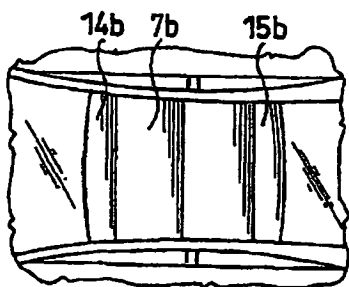


FIG. 7

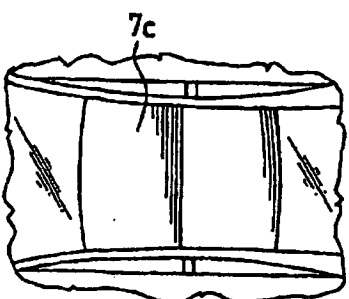
FIG. 8



A

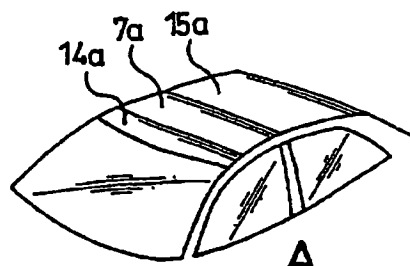


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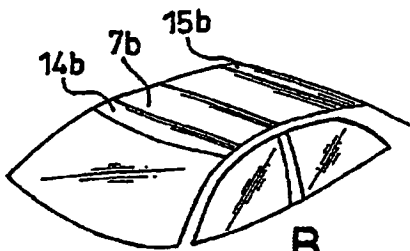


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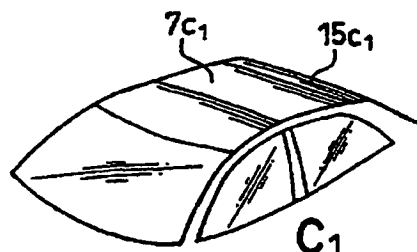
FIG. 9



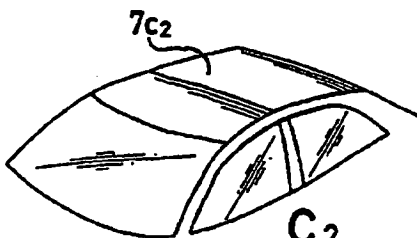
A



B



C1



C2

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