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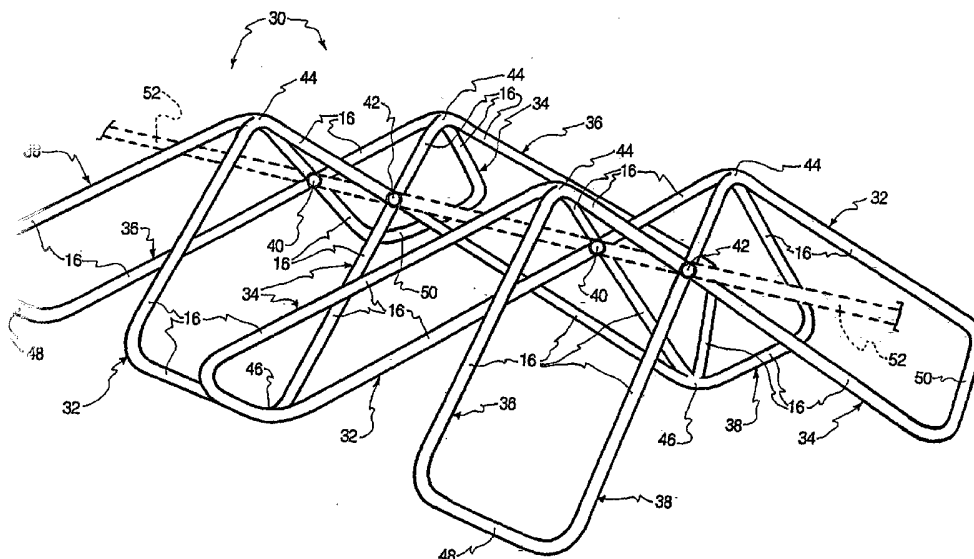
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(54) Title: OPEN FRAMES FOR PROVIDING STRUCTURAL SUPPORT AND RELATED METHODS



(57) Abstract: A frame (10) for providing structural support comprising at least first (12) and second (14) zig zag frame members respectively comprising opposed sets apexes (18) and elongated segments (16) between the opposite apexes (18), the zig zag members (12, 14) asymmetrically integrally intersecting each other at spaced locations, the distances along the elongated segments (16) from the intersection (20) to one set of apexes (18) being less than the distance along the elongated segments (16) from the intersections (20) to the opposite set of apexes (18). The frame (30) may also include third (34) and fourth (38) zig zag members having an inverted orientation in respect to the first (12) and second (14) zig zag members such that four elongated segments (16) integrally intersect at each apex (44) and define four edges of a pyramid configuration adjacent each apex (44).

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/38954

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : E04H 12/00

US CL : 52/652.1

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)

U.S. : 52/652.1, 648.1, 651.01, 651.07, 651.09, 653.1, 693, 694

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 practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,921,048 A (FRANCOM ET AL) 13 July 1999 (13.07.99) see all figures	1-32
A	US 3,298,152 A (LOCKSHAW) 17 January 1967 (17.01.67), see figs. 1-7	1-32
A	US 3,751,869 A (MCDONALD ET AL) 14 August 1973 (14.08.73), see figures 1,2	1
A	US 3,798,864 A (GEORGII) 26 March 1974 (26.03.74), see fig. 1-3	1
A	US 3,913,105 A (WILLIAMSON ET AL) 14 October 1975 (14.10.75), see fig. 1	1
A	US 4,557,097 A (MIKULAS, JR. ET AL) 10 December 1985 (10.12.85), see figure 1	1
A	US 4,722,162 A (WILENSKY) 02 February 1988 (02.02.88), see fig. 5	1
A	US 5,070,673 A (WEISSE) 10 December 1991 (10.12.91), see fig. 28	1

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

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