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# United States Patent [19]

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**Losi, Jr. et al.**

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## [54] COLLAPSIBLE SHELTER

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[21] Appl. No.: **773,265**

[22] Filed: **Dec. 23, 1996**

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### Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 611,511, Mar. 7, 1996, Pat. No. 5,638,853.

[51] Int. Cl.<sup>6</sup> ..... **E04H 15/50**

[52] U.S. Cl. .... **135/131; 135/145; 135/151; 403/109; 403/329; 403/377**

[58] Field of Search ..... **135/128, 130, 135/131, 143, 144, 145, 146, 151, 135, 114, 115; 403/109, 329, 377**

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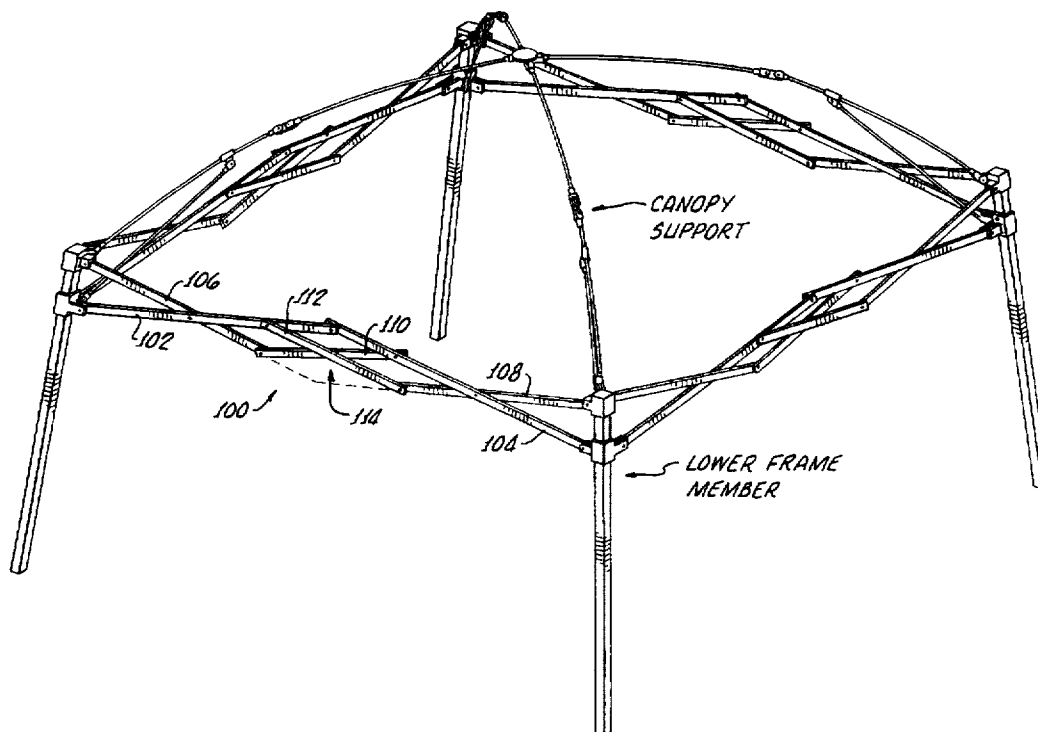
Primary Examiner—Lanna Mai

Attorney, Agent, or Firm—Oppenheimer Poms Smith

### [57] ABSTRACT

A shelter frame having at least two poles connected by a linking assembly having first and second scissors-type linkages and a linking device. The scissors-type linkages include first structural members pivotally coupled to respective second structural members and to one another. The linking device is adapted to pivotally secure a predetermined portion of the second structural member in the first scissors-type linkage to the second scissors-type linkage at a point on the second scissors-type linkage vertically spaced from the predetermined portion of the second structural member in the first scissors-type linkage and to also pivotally secure a predetermined portion of the second structural member in the second scissors-type linkage to the first scissors-type linkage at a point on the first scissors-type linkage vertically spaced from the predetermined portion of the second structural member in the second scissors-type linkage.

31 Claims, 15 Drawing Sheets



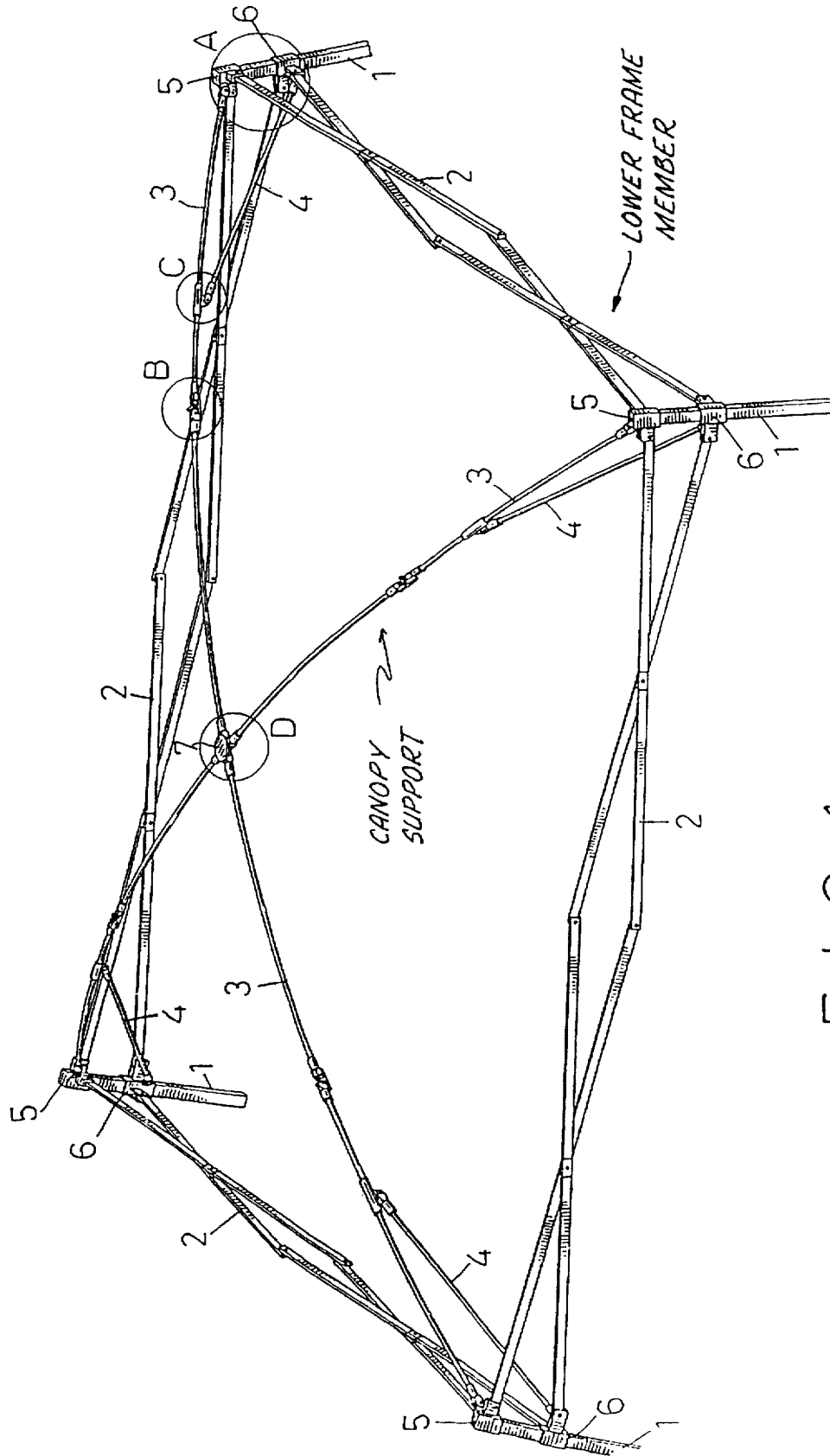


FIG. 1

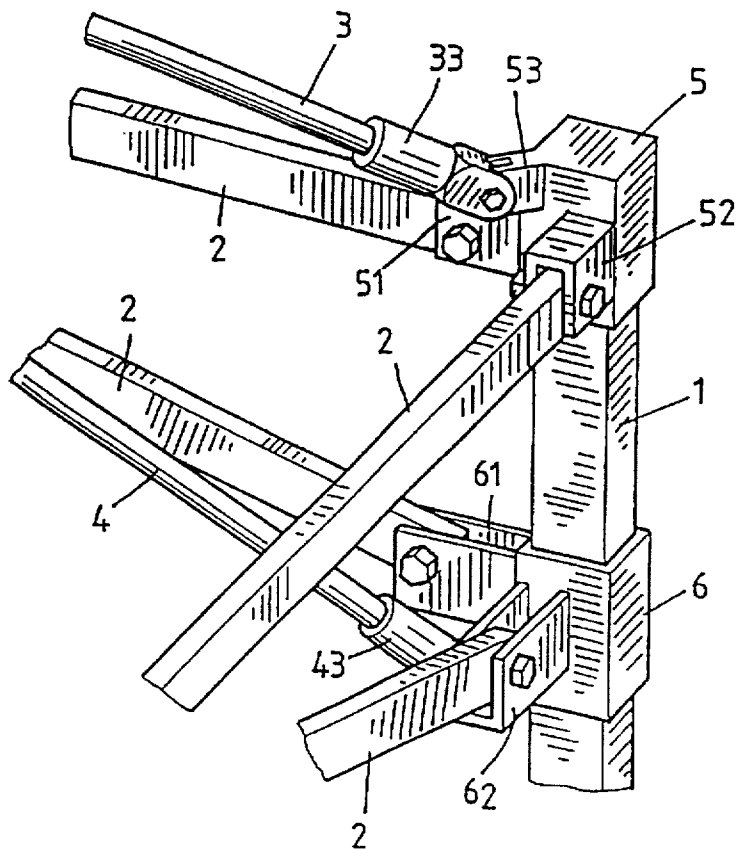


FIG. 2

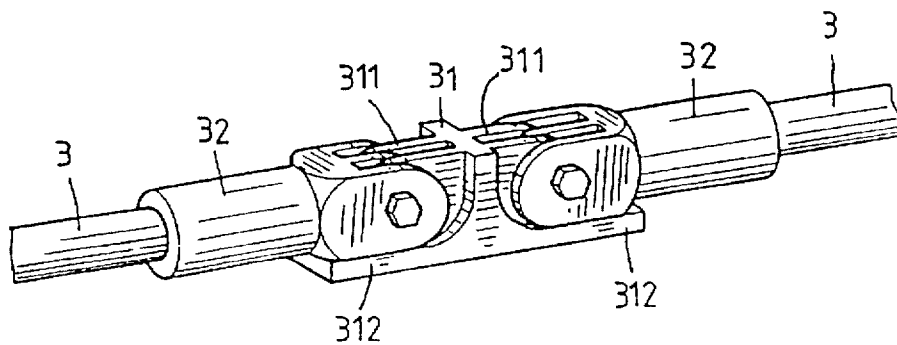


FIG. 3

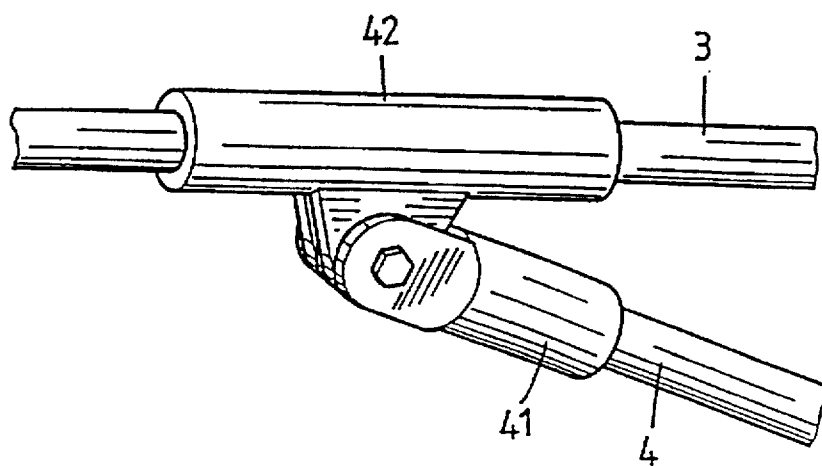


FIG. 4

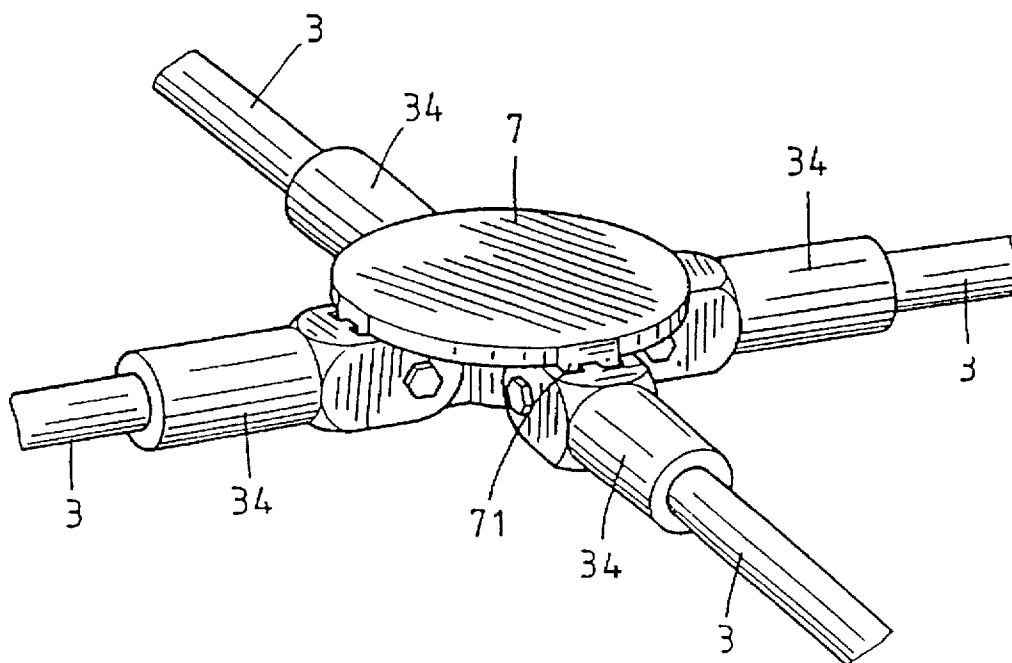


FIG. 5

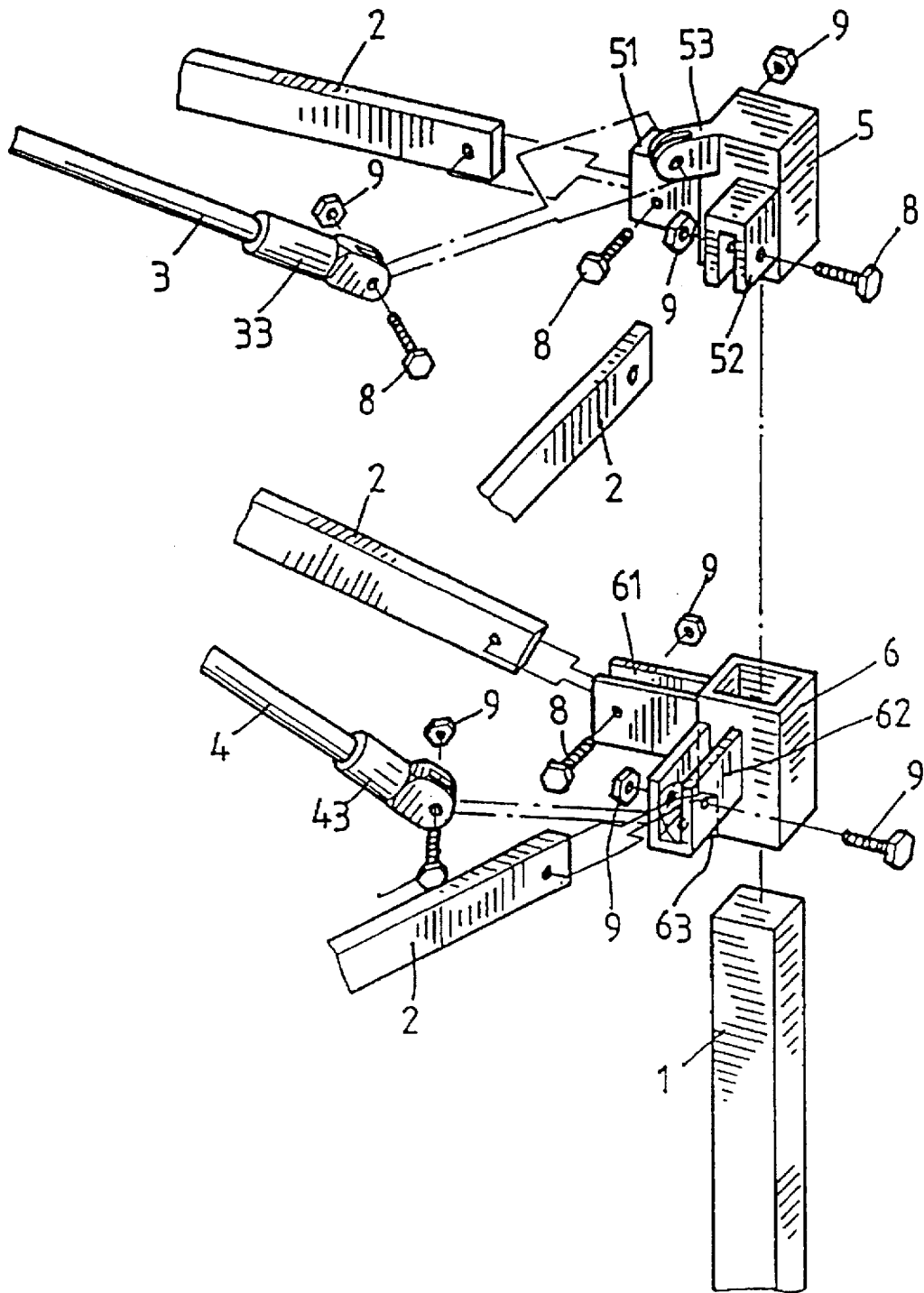


FIG. 6

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