



US005944040A

United States Patent [19] Jang

[11] Patent Number: **5,944,040**
[45] Date of Patent: **Aug. 31, 1999**

[54] **COLLAPSIBLE TENT FRAME**
[76] Inventor: **Jung-Woo Jang**, 53-28 Gamsam Dong
Dalseo-Ku, Daegu, Rep. of Korea

5,634,483 6/1997 Gwin 135/131
5,701,923 12/1997 Losi, Jr. et al. 135/131
5,794,640 8/1998 Jang 135/131

[21] Appl. No.: **09/082,482**
[22] Filed: **May 21, 1998**

Primary Examiner—Carl D. Friedman
Assistant Examiner—Dennis L. Dorsey
Attorney, Agent, or Firm—Griffin, Butler, Whisenhunt & Szipl, LLP

[30] **Foreign Application Priority Data**
May 23, 1997 [KR] Rep. of Korea 97-11752

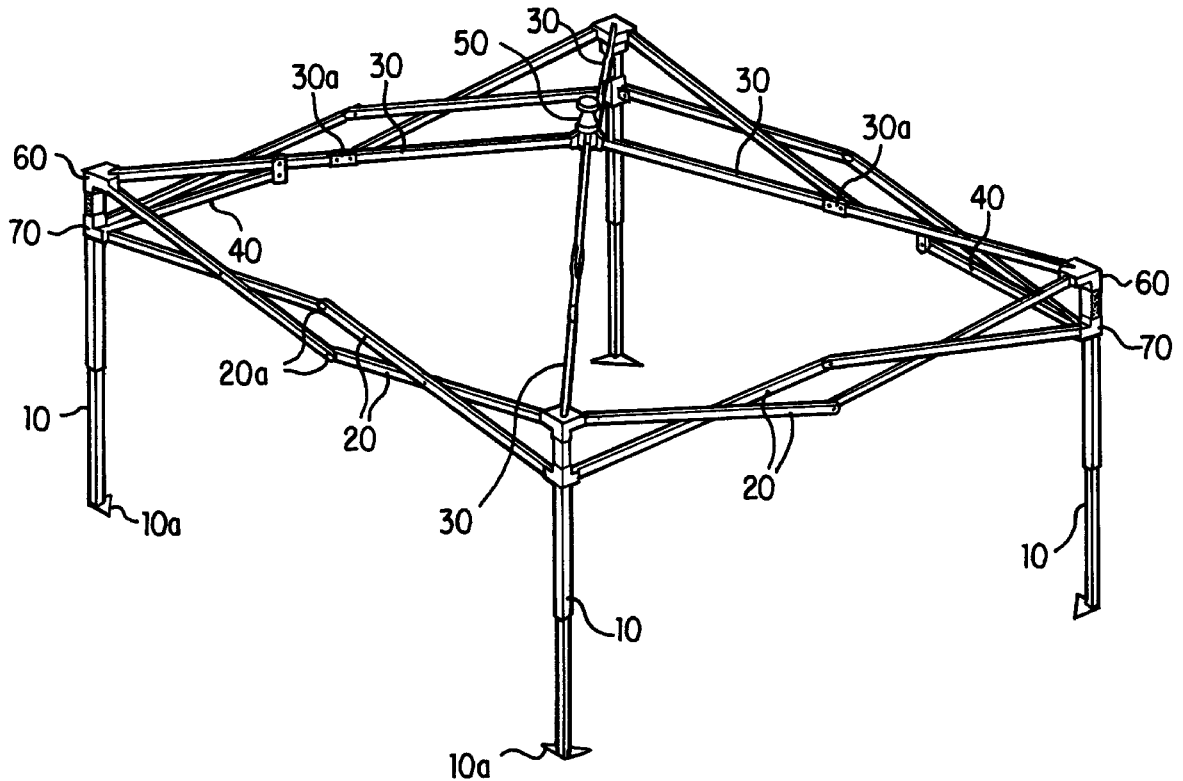
[57] ABSTRACT

[51] **Int. Cl.⁶** **E04H 15/26**
[52] **U.S. Cl.** **135/126; 135/128; 135/130;**
135/131
[58] **Field of Search** 52/79.5; 135/126,
135/128, 131, 130, 97

A collapsible tent frame is disclosed. The tent frame has a center pole used for stretching and sustaining a tent's roof when pitching a tent. A plurality of side poles are coupled to each other through a plurality of scissor-type ribs, with upper ends of the ribs being hinged to connectors provided at top ends of the side poles and lower ends of the ribs being hinged to sliders movably fitted over the side poles. The center pole is coupled to the connectors of the side poles through a plurality of center pole ribs. The above center pole ribs individually consist of two rib members, which are coupled to each other through a hinge joint. Each of the center pole ribs is also hinged to the slider of an associated side pole through a support link, thus being collapsible at the hinge joint in accordance with a sliding motion of the slider along the side pole.

[56] **References Cited**
U.S. PATENT DOCUMENTS
1,666,757 4/1928 Sntder 135/97
4,641,676 2/1987 Lynch 135/110
4,779,635 10/1988 Lynch 135/97
4,947,884 8/1990 Lynch 135/97
5,275,188 1/1994 Tsai 135/97
5,421,356 6/1995 Lynch 135/145

3 Claims, 4 Drawing Sheets



Petitioners Exhibit 1001

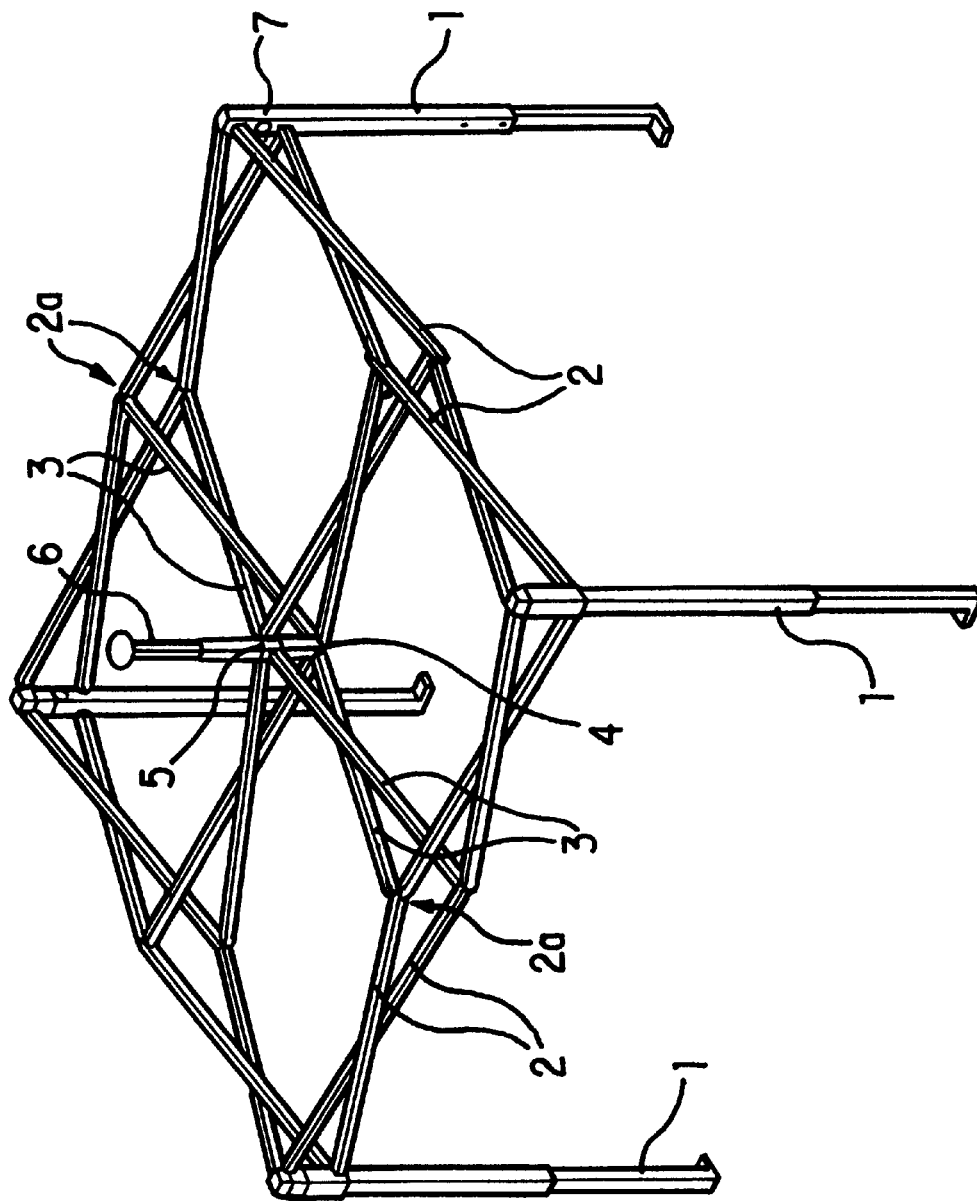


FIG. 1
PRIOR ART

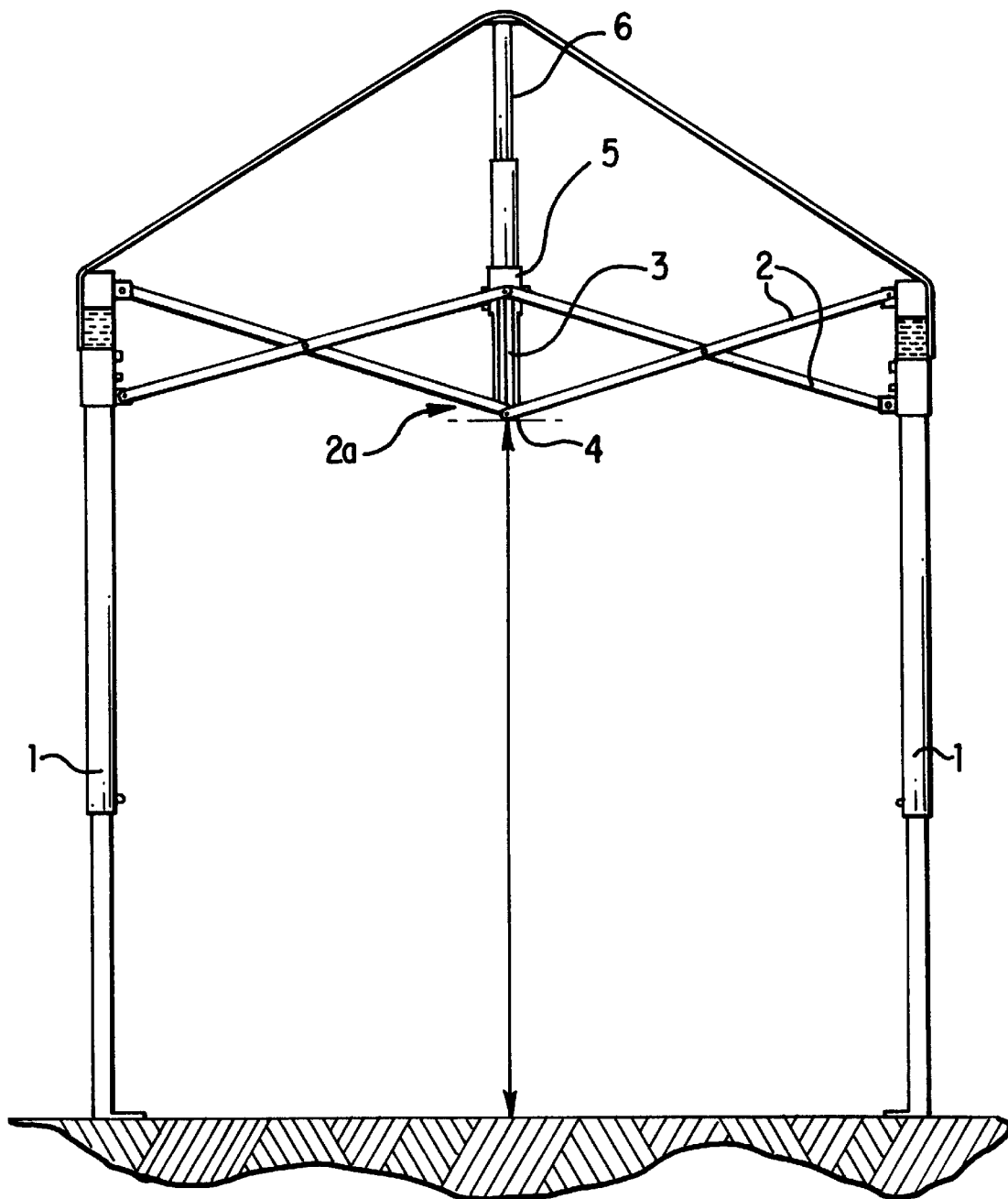


FIG. 2
PRIOR ART

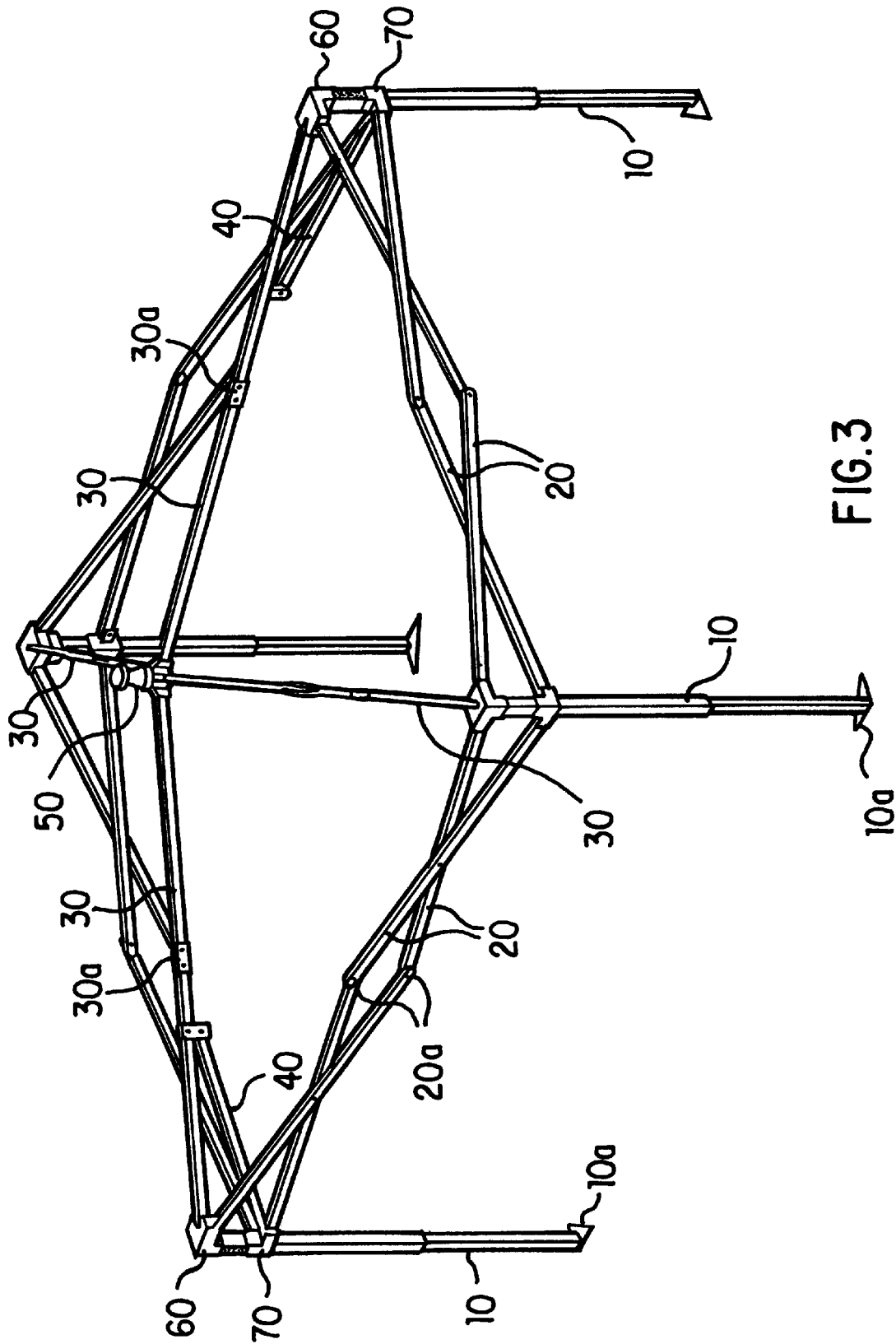


FIG.3

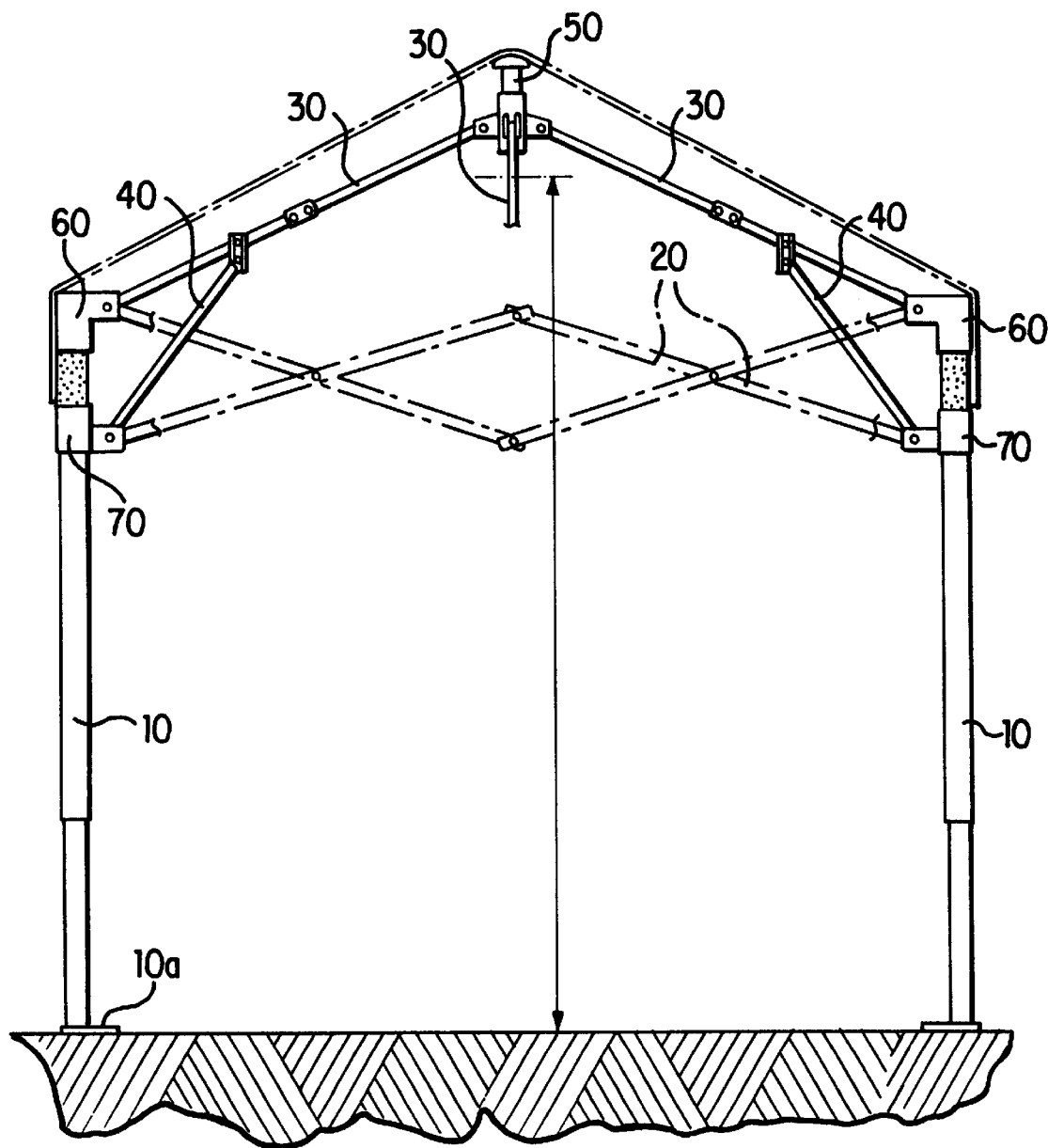


FIG.4

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.