

(12) **United States Patent**  
Lee

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(54) **BEACH UMBRELLA WITH LAMPS**

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2002/0124876 A1 \* 9/2002 Chen ..... 135/16  
2002/0145873 A1 \* 10/2002 Rahman ..... 362/252  
2002/0149934 A1 \* 10/2002 Lin ..... 362/252  
2003/0067765 A1 \* 4/2003 Li ..... 362/102

**FOREIGN PATENT DOCUMENTS**

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 149 days.

JP 2000354506 \* 12/2000  
JP 200117217 \* 1/2001

\* cited by examiner

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(51) **Int. Cl.<sup>7</sup>** ..... **A45B 3/04**

(52) **U.S. Cl.** ..... **135/910**; 135/16; 362/102

(58) **Field of Search** ..... 135/16, 910; 362/102, 362/234, 249, 252

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

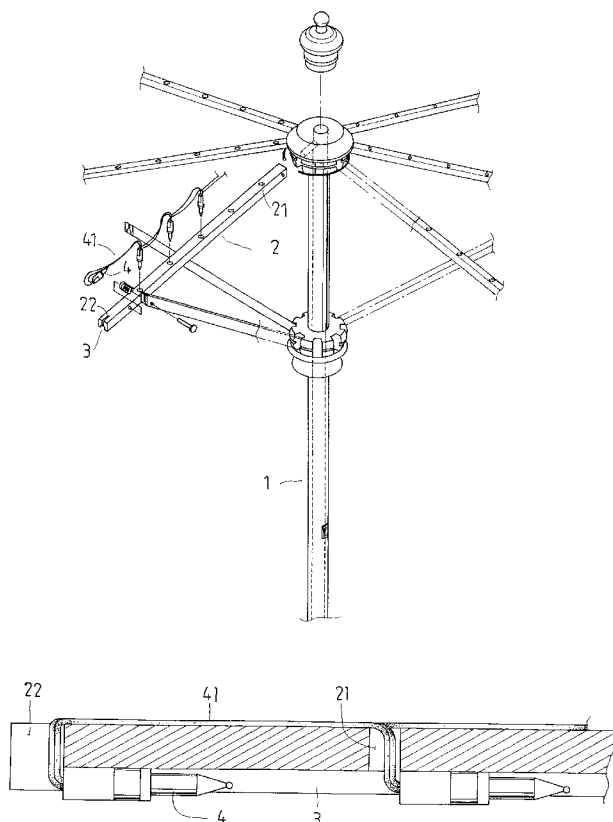
5,758,948 A \* 6/1998 Hale ..... 362/249  
6,089,727 A \* 7/2000 Wu ..... 135/910  
6,302,560 B1 \* 10/2001 Lai ..... 362/249  
6,439,249 B1 \* 8/2002 Pan et al. .... 135/16  
6,443,595 B1 \* 9/2002 Tseng ..... 362/252  
6,497,496 B2 \* 12/2002 Wang ..... 362/249

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*Assistant Examiner*—Hanh V. Tran  
(74) *Attorney, Agent, or Firm*—Rosenberg, Klein & Lee

(57) **ABSTRACT**

A beach umbrella with lamps is provided with receiving trenches lengthwise on each of the ribs thereof, and the ribs each has several spaced through holes communicating with the trench. Several of the lamps are each connected to one of branches of a conductive wire. The wires are placed along the ribs, and the branches are each passed through one of the through holes with the wires and the lamps being arranged on two opposing sides of the ribs; when the trenches are formed on bottom of ribs, the lamps can be closely received in the trenches with most of the weight being supported by the wires held on the ribs, therefore the same can't possibly fall off even when the umbrella is being stretched or folded.

**4 Claims, 9 Drawing Sheets**



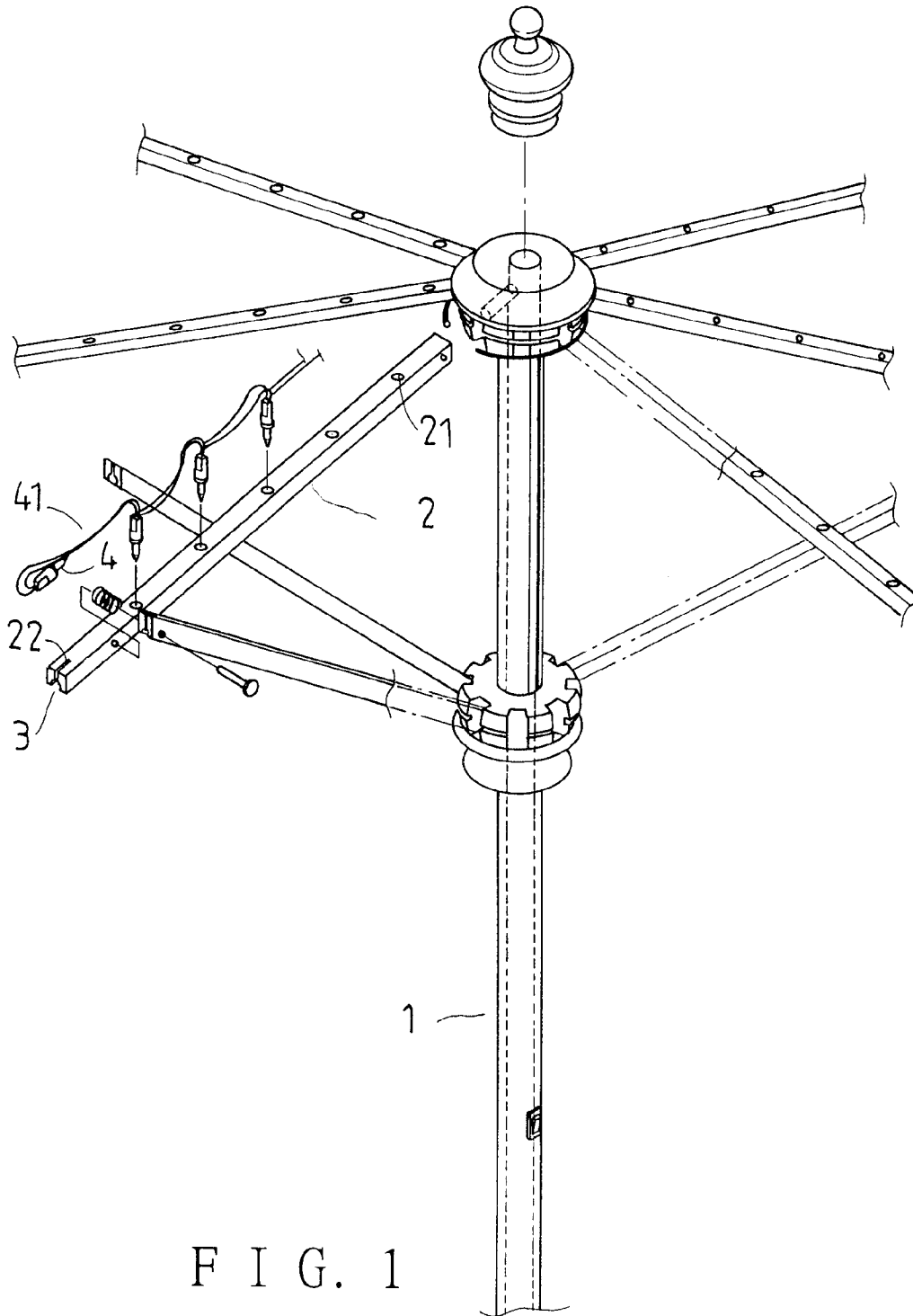
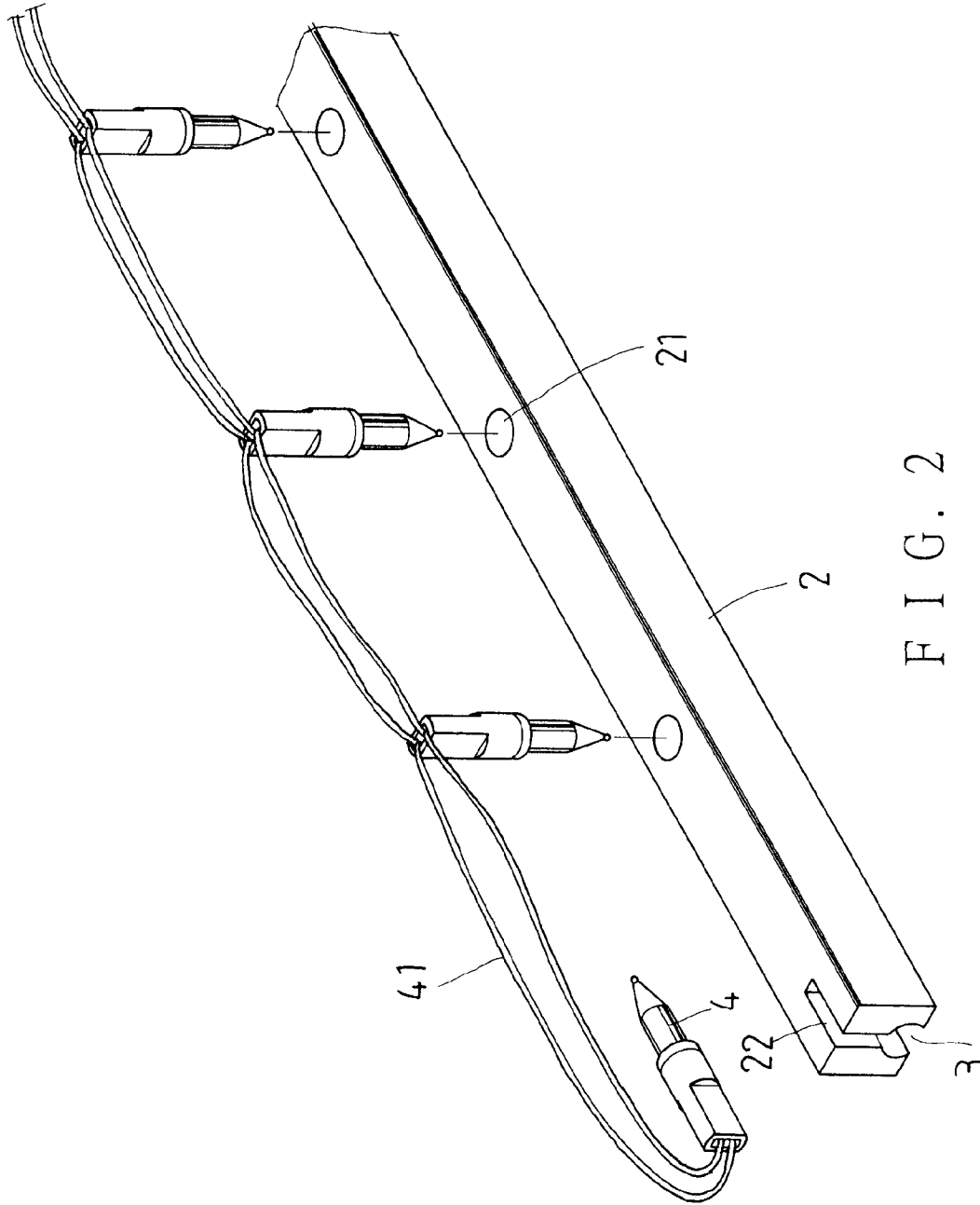


FIG. 1



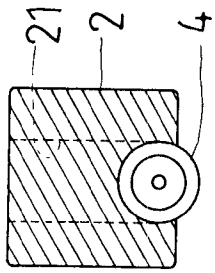


FIG. 4

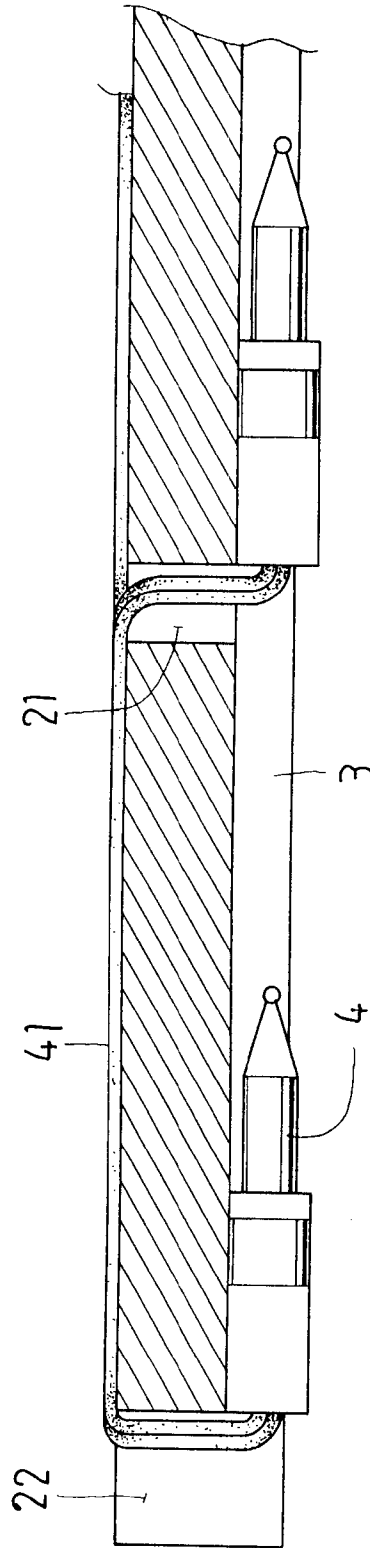


FIG. 3

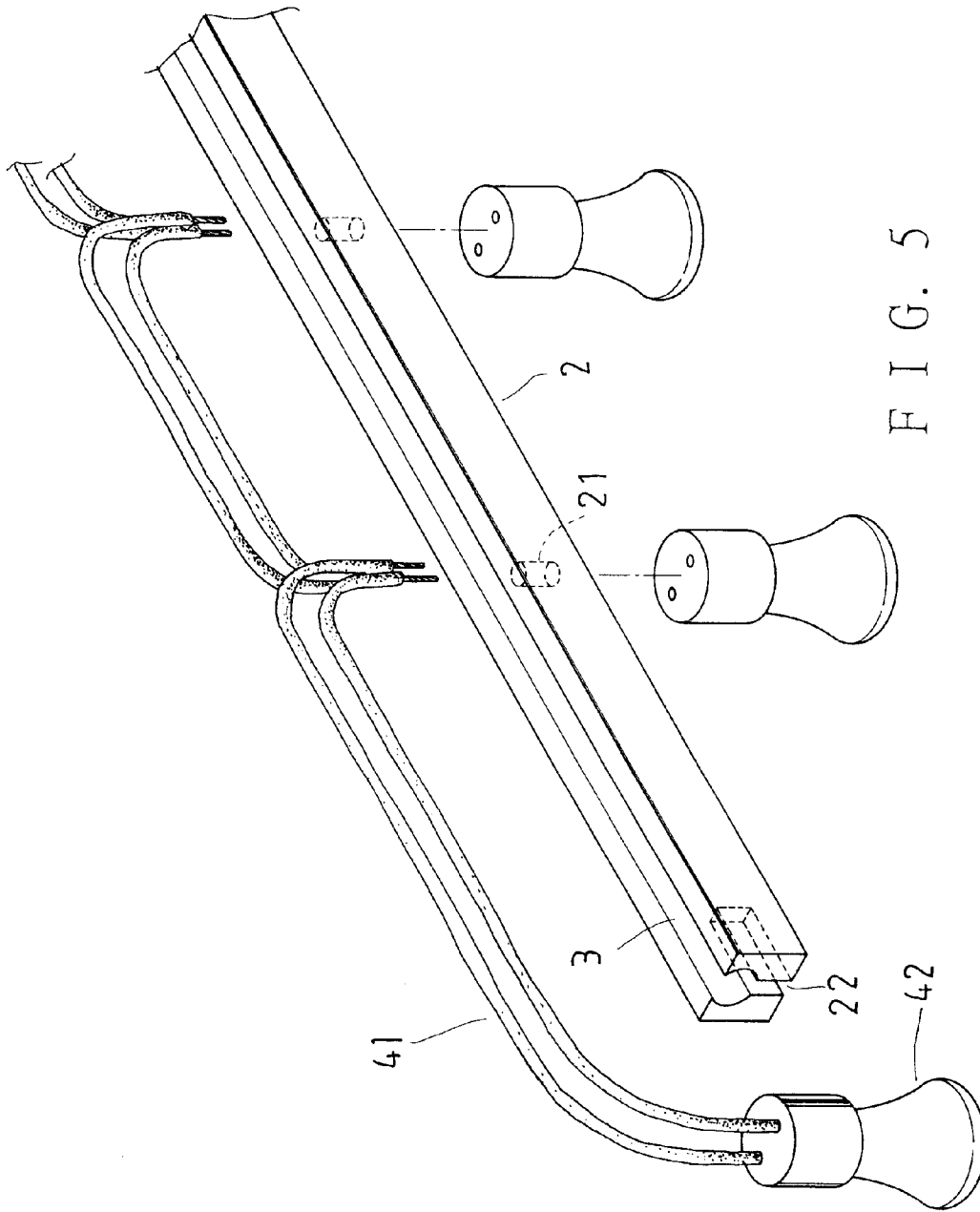


FIG. 5

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