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05/21/98

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No.	HANIN0006
First Inventor or Application Identifier	Jung-Woo JANG
Title	COLLAPSIBLE TENT FRAME
Express Mail Label No.	

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.	ADDRESS TO: Assistant Commissioner for Patents Box Patent Application Washington, DC 20231
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- * Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
- Specification [Total Pages 11]
(preferred arrangement set forth below)
 - Descriptive title of the Invention
 - Cross References to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to Microfiche Appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
- Drawing(s) (35 U.S.C. 113) [Total Sheets 4]
- Oath or Declaration [Total Pages]
 - Newly executed (original or copy)
 - Copy from a prior application (37 C.F.R. § 1.63(d))
(for continuation/divisional with Box 17 completed)
[Note Box 5 below]
 - DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).
- Incorporation By Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

- Microfiche Computer Program (Appendix)
- Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - Computer Readable Copy
 - Paper Copy (identical to computer copy)
 - Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

- Assignment Papers (cover sheet & document(s))
- 37 C.F.R. §3.73(b) Statement Power of Attorney
(when there is an assignee)
- English Translation Document (if applicable)
- Information Disclosure Statement (IDS)/PTO-1449 Copies of IDS Citations
- Preliminary Amendment
- Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
- * Small Entity Statement(s) Statement filed in prior application, Status still proper and desired
(PTO/SB/09-12)
- Certified Copy of Priority Document(s)
(if foreign priority is claimed)
- Other:

* NOTE FOR ITEMS 1 & 14: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

Continuation Divisional Continuation-in-part (CIP) of prior application No. _____ / _____

Prior application information Examiner _____ Group / Art Unit _____

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COLLAPSIBLE TENT FRAME

BACKGROUND OF THE INVENTION

Field of the Invention

5 The present invention relates, in general, to collapsible tent frames capable of making pitching or striking a tent easy and quick when necessary and, more particularly, to a collapsible tent frame suitable for giving an enlarged and heightened interior space to users when pitching a tent.

Description of the Prior Art

10 As well known to those skilled in the art, a tent is a collapsible shelter of canvas or other material stretched over and sustained by a frame and is used for camping outdoors or as a temporary structure. It is preferable for such a tent to be easily and quickly pitched or struck when necessary, so a
15 frame for such tents is preferably designed for being collapsible. Examples of typical collapsible tent frames are referred to U.S. patents 4,641,676 (issued on Feb. 10, 1987), 4,779,635 (issued on Oct. 25, 1988), 4,947,884 (issued on Sep. 14, 1990), 5,275,188 (issued on Jan. 4, 1994) and 5,421,356
20 (issued on Jan. 6, 1995).

The above U.S. patents individually disclose a collapsible tent frame which comprises a plurality of side

pole ribs 2, with each pair of ribs 2 being coupled to each other at the center of them into a scissor assembly as shown in Fig. 1. The scissor assemblies of the side pole ribs 2 are also coupled to each other at joints 2a and are connected to four side poles 1 at their outside ends.

In such a case, the outside upper end of each scissor assembly of the ribs 2 is hinged to the top end of a side pole 1, while the outside lower end of each scissor assembly is hinged to a slider 7 movably fitted over the side pole 1. Therefore, when a user moves the four side poles 1 to the center of the tent frame, the sliders 7 move down on the side poles 1 respectively, thus folding the scissor assemblies of the ribs 2 at the joints 2a and collapsing the tent frame.

The above tent frame also comprises a plurality of center pole ribs 3, with each pair of ribs 3 being coupled to each other at the center of them into a scissor assembly. Each scissor assembly of the above ribs 3 is hinged to the joints 2a of the side pole ribs 2 at the outside ends and are hinged to a center pole 6 at the inside ends. In such a case, the inside lower end of each scissor assembly of the ribs 3 is hinged to a connector 4 provided on the lower end of the center pole 6, while the inside upper end of each scissor assembly is hinged to a slide guider 5 into which the center pole 6 is movably fitted. Therefore, when the four side poles 1 are moved to the center of the tent frame, the center pole

6 moves down in the slide guider 5, thus folding the scissor assemblies of the center pole ribs 3 and collapsing the tent frame.

5 However, the above collapsible tent frame has the following problem. That is, in the above tent frame, the center pole ribs 3 are coupled to the joints 2a of the side pole ribs 2. Therefore, when pitching a tent, the center pole ribs 3 are positioned across the upper portion of the interior space as shown in Fig. 2, thus limiting the height of the interior space.

10 It is thus necessary for a user to be careful lest one bumps one's head against the center pole ribs 3 or the connector 4 while going out of, coming into or standing in the tent. Therefore, the above tent frame is inconvenient to users.

15 In addition, the center pole 6 comprises the connector 4 and the slide guider 5, thus having a complex construction and increasing the production cost of the tent frame. Another problem of the above collapsible tent frame resides in that it is too heavy for a user to easily handle or move the frame.

SUMMARY OF THE INVENTION

Accordingly, the present invention has been made keeping in mind the above problems occurring in the prior art, and an

object of the present invention is to provide a collapsible tent frame, of which the center pole is coupled to the side poles, thus giving an enlarged and heightened interior space to users when pitching a tent and allowing a user to easily handle the frame when pitching or striking the tent.

In order to accomplish the above object, the present invention provides a collapsible tent frame, comprising: a center pole used for stretching and sustaining a tent's roof when pitching a tent; a plurality of side poles 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; and a plurality of center pole ribs coupling the center pole to the connectors of the side poles, the center pole ribs individually comprising two rib members coupled to each other through a hinge joint and being 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.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and other objects, features and other advantages of the present invention will be more clearly

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