



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 411 189 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
21.04.2004 Bulletin 2004/17

(51) Int Cl.7: **E04H 15/06**

(21) Application number: **03078183.5**

(22) Date of filing: **08.10.2003**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PT RO SE SI SK TR**
Designated Extension States:
AL LT LV MK

(71) Applicant: **Holtkamp, Egbert Berend
NL-9561 JK Ter Apel (NL)**

(72) Inventor: **Holtkamp, Egbert Berend
NL-9561 JK Ter Apel (NL)**

(30) Priority: **19.10.2002 NL 1021704**

(54) **Method and mechanism for putting up a tent**

(57) The invention relates to a method and a mechanism for putting up a tent (5). The tent, which is originally stored inside a trolley (1), is spread over and round

the trolley (1), after which a support element (2), placed into top, raises the tent (5). Finally, the tent (5) is attached to the groundsheet (6) with zippers and the tent (5) is fixed to the ground with tent pegs.

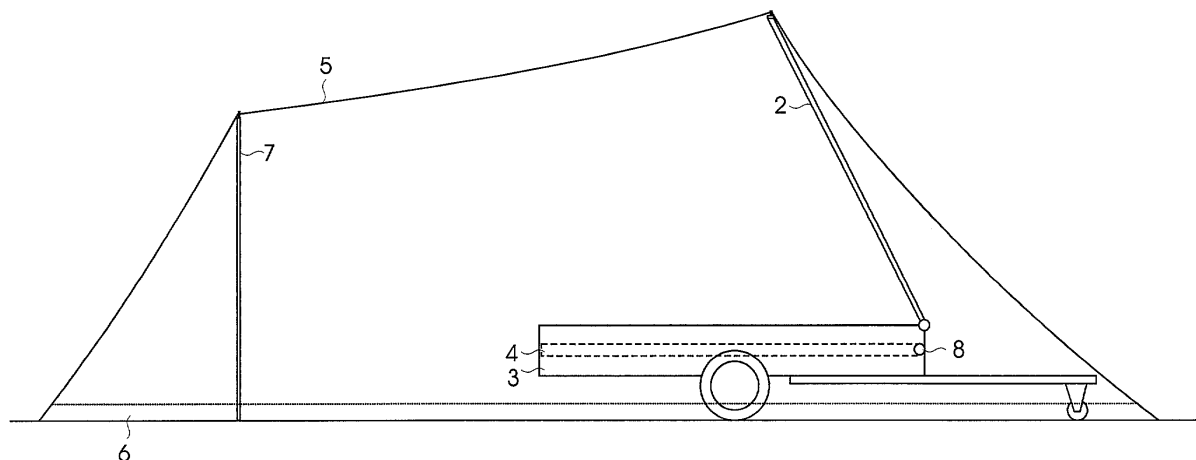


Fig. 1B

EP 1 411 189 A2

Description

[0001] The invention relates to a method for putting up a tent, where the tent is initially stored in a trolley. Methods of this type are known. They are used for example for putting up so-called tenttrailers, which comprise a tent part when unfolded.

[0002] It turns out that a large part of the camping community prefers a tent to a tenttrailer. The present invention provides a method according to which the indisputable advantages of the tenttrailer can be used for putting up a tent and more specifically a pyramid-shaped tent. Qualitatively good, stormproof pyramid-shaped tents do weigh a number of tens of kilograms and for unloading and putting up a tent of that kind a substantial physical effort is required. The inventive method obviates this disadvantage and is characterised in that at least one tip of an at least substantially horizontally extending support element, positioned underneath the tent, is placed in at least one supporting point of a peak of a roof of the tent, that either the tent is spread out round the trolley, after which the support element is erected, or the support element is erected, after which the tent is spread out round the trolley and that subsequently the edges of the tent are attached to the ground and/or to the trolley. There is no need any more to lug along with heavy sacks and the tent is put up within a few minutes. An important additional advantage is that the trolley, which remains standing inside the tent, may comprise a made up bed, so that no longer air mattresses have to be inflated and more in particular the comfort for the users is significantly improved.

[0003] A favourable embodiment of the inventive method with which the comfort for the users may be increased even further is characterised in that before the tent is put up, a groundsheet is placed, that the trolley is placed on a previously determined place onto the groundsheet and that subsequently the tent is put up and attached to the groundsheet. Preferably, the tent is attached to the groundsheet with the aid of one or more zippers, with which a practically watertight and insect proof connection can be made and which moreover increases the integrity of the tent as a whole.

[0004] A further favourable embodiment which significantly reduces the physical power, needed to erect the support element is characterised in that preparatory to the erection, the support element is provided with a lever, by hitching on or by folding out, which puts out outside the trolley, and that while putting up the tent, the projecting part of the lever is moved downward, where preferably the projecting part of the lever is moved downward with the aid of a winch, connected to the trolley.

[0005] The invention also relates to a mechanism for putting up a tent, accommodated inside a trolley. Mechanism of this kind are known for example from tenttrailers, where they may simplify significantly the putting up of tent parts. The mechanism according to the invention

aims at simplifying the putting up of a tent as such, and more in particular a pyramid-shaped tent. It is thereto characterised in that the mechanism comprises a support element, of which one end is mounted for rotation to the trolley and a second end is provided with at least one pointed element which is operationally placed in at least one supporting point of a peak of a roof of the tent. Putting up the tent in fact means now the erection of the support element, spreading means now the erection of the support element, spreading out the tent round the trolley and fixing it to the ground.

[0006] A favourable embodiment of the inventive mechanism is characterised in that the support element is provided with a coupling element, to which a first end of a lever is coupled or may be coupled. By using the lever, the support element may be erected in a simple manner, without a big effort.

[0007] A further favourable embodiment is characterised in that a second end of the lever projects outside the trolley and is provided with a coupling ring or coupling hook. Preferably, the mechanism comprises a winch, connected to the trolley, for coupling to the coupling ring or coupling hook, so that the support element may be erected without any effort.

[0008] A favourable embodiment according to a further aspect of the invention is characterised in that the coupling element comprises a hinge, with which the lever is hingedly mounted to the support element. In a first, folded position the lever may then substantially overlap with the support element while in a second, unfolded position it may be used as a lever.

[0009] The invention also relates to a trolley, provided with a mechanism for putting up a tent as described in the above.

[0010] The invention will now be further explained with a reference to the following figures, in which:

Fig. 1A schematically represents a possible embodiment of a trolley in side view, provided with a mechanism for putting up a tent in a folded position;

Fig. 1B schematically represents this embodiment in side view in an unfolded position;

Fig. 2A schematically represents the unfolding of the lever in side view;

Fig. 2B schematically represents the erection of a support element in side view;

Fig. 3A schematically represents a possible embodiment of a support element and a lever in a folded position;

Fig. 3B schematically represents the lever in an unfolded position.

[0011] Fig. 1A schematically represents a possible embodiment of a trolley 1, provided with a support element 2 in a folded position. Trolley 1 comprises more in particular a luggage space 3 and a bed 4, onto which the more or less folded tent 5 is placed. On top of that,

a groundsheet 6 may be placed, but this groundsheet is shown here in an unfolded position with trolley 1 on top of it on a marked position. Tent 5 may now be spread round and over trolley 1 in such a manner that a pointed end of support element 2 can be put into a supporting point in the peak of the tent and fixed there if desired. Next, support element 2 is erected, which results in tent 5 assuming more or less taking shape.

[0012] Fig. 1B schematically represents this embodiment in side view in an unfolded position, where tent 5 is attached to groundsheet 6, for example with zippers, and where some additional tent poles 7 have been placed if necessary. Tent 5 is moreover anchored to the ground in a well known manner with tent pegs, not shown in the figure, and support element 2 is fixed into the shown position. If required, part of tent 5 can be attached to trolley 1. Bed 4 is ready for use and is moreover hinged connected to trolley 1 by a hinge 8, so that it may be folded up and luggage, stored in luggage space 3 underneath bed 4 can be reached.

[0013] Fig. 2A schematically represents the unfolding of the lever 9 in side view. Originally, lever 9 is folded in, so that it substantially overlaps with support element 2. Prior to putting up the tent, lever 9 is folded out, in the figure to the right, and an a coupling ring 10, attached to lever 9, is fixed to a winch 11, for example with the aid of a carbine. Fig. 2B schematically represents the erection of support element 2, where lever 9 is pulled downwards with the aid of winch 11 and where tent 5 gets towards the unfolded position.

[0014] Fig. 3A schematically represents a possible embodiment of a support element 2 and a lever 9 in a folded position. Support element 2 consists in this embodiment of a tube 12 which is mounted for rotation to a side wall of trolley 1 and two profiles 13a,13b which end in a top, onto which a pointed element 14 is connected that can be placed into a supporting point in the peak of the tent. Between profiles 13a,13b, a tube 15 is mounted, onto which lever 9 is mounted for rotation. Lever 9 consists of a tube 16 which may rotate round tube 15 and onto which two profiles 17a,17b are connected which end in a top, onto which a coupling ring or coupling hook 18 is connected. In the position shown here, lever 9 is positioned completely within support element 2 and occupies substantially no space.

[0015] Fig. 3B schematically represents support element 2 and lever 9 in an unfolded position. The top with coupling ring or coupling hook 18 is positioned outside trolley 1 and can be coupled to winch 11 now.

[0016] Support element 2 and lever 9 may be manufactured of tubes made of steel. They may assume in fact any shape. The embodiment shown here couples a low weight to a large lateral stability, which is important in order to withstand laterally directed wind loads. Winch 11 may be operated electrically or manually and must be provided with a stop mechanism in order to hold support element 2 in the unfolded position.

[0017] It is also possible to design lever 9 so that it

can be removed, in which case tube 16 is replaced by a trough-shaped element that can be placed round tube 15. The profiles 17a,17b can be replaced then for example by a tube, welded perpendicular to the trough-shaped element to which coupling ring or coupling hook 18 is connected.

[0018] For a tent having two supporting points, pointed element 14 may simply be replaced by a small beam to which two pointed elements 14 are fixed in the right positions.

Claims

1. Method for putting up a tent, where the tent is initially stored in a trolley, **characterised in that** at least one tip of an at least substantially horizontally extending support element, positioned underneath the tent, is placed in at least one supporting point of a peak of a roof of the tent, that either the tent is spread out round the trolley, after which the support element is erected, or the support element is erected, after which the tent is spread out round the trolley and that subsequently the edges of the tent are attached to the ground and/or to the trolley.
2. Method according to claim 1, **characterised in that** before the tent is put up, a groundsheet is placed, that the trolley is placed on a previously determined place onto the groundsheet and that subsequently the tent is put up and attached to the groundsheet.
3. Method according to claim 1 of 2, **characterised in that** preparatory to the erection, the support element is provided with a lever, by hitching on or by folding out, which puts out outside the trolley, and that while putting up the tent, the projecting part of the lever is moved downward.
4. Method according to claim 3, **characterised in that** the projecting part of the lever is moved downward with the aid of a winch, connected to the trolley.
5. Mechanism for putting up a tent, accommodated inside a trolley, **characterised in that** the mechanism comprises a support element, of which one end is mounted for rotation to the trolley and a second end is provided with at least one pointed element which is operationally placed in at least one supporting point of a peak of a roof of the tent.
6. Mechanism according to claim 5, **characterised in that** the support element is provided with a coupling element, to which a first end of a lever is coupled or may be coupled.
7. Mechanism according to claim 6, **characterised in that** a second end of the lever projects outside the

trolley and is provided with a coupling ring or coupling hook.

8. Mechanism according to claim 7, **characterised in that** the mechanism comprises a winch, connected to the trolley, for coupling to the coupling ring or coupling hook. 5
9. Mechanism according to one of the claims 6 to 8, **characterised in that** the coupling element comprises a hinge, with which the lever is hingedly mounted to the support element. 10
10. Trolley, provided with a mechanism according to one of the claims 5 to 9. 15

20

25

30

35

40

45

50

55

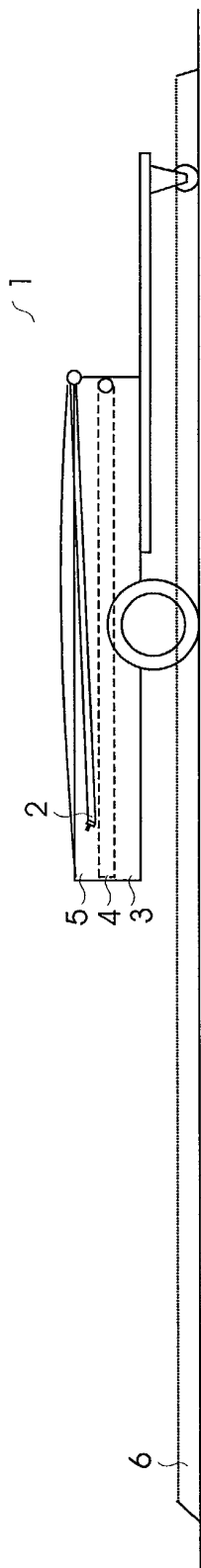


Fig. 1A

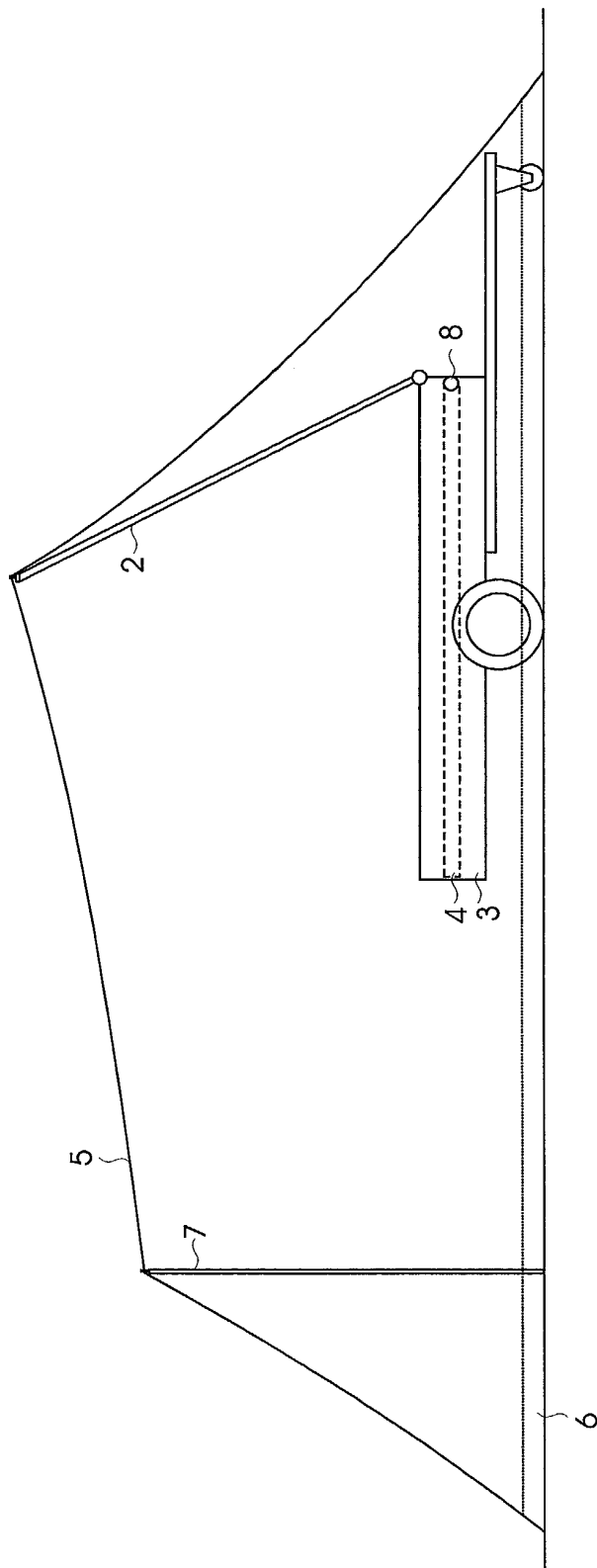


Fig. 1B

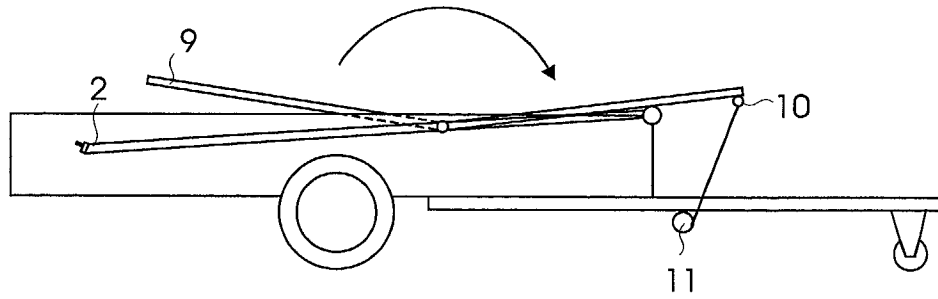


Fig. 2A

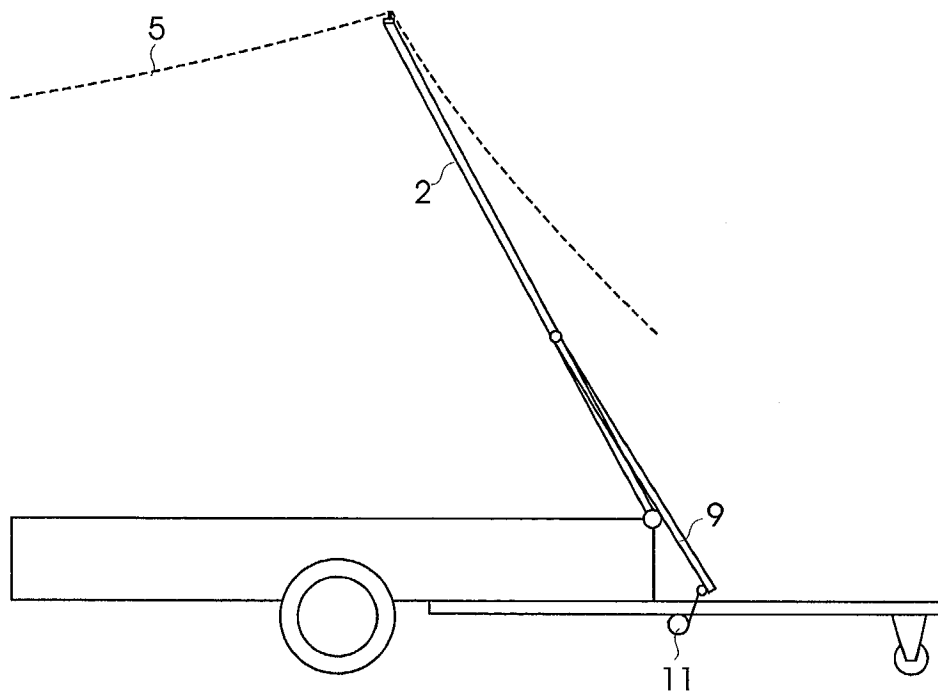


Fig. 2B

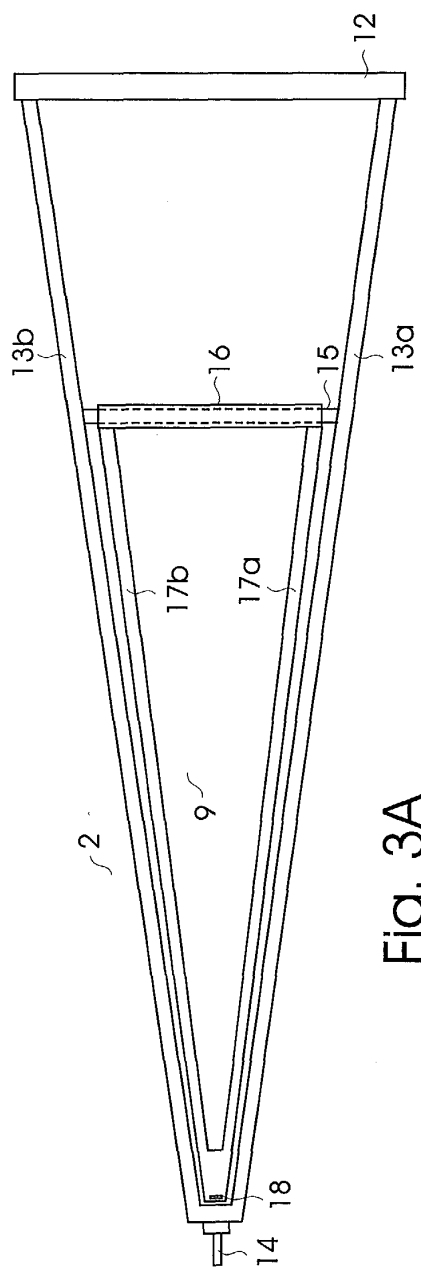


Fig. 3A

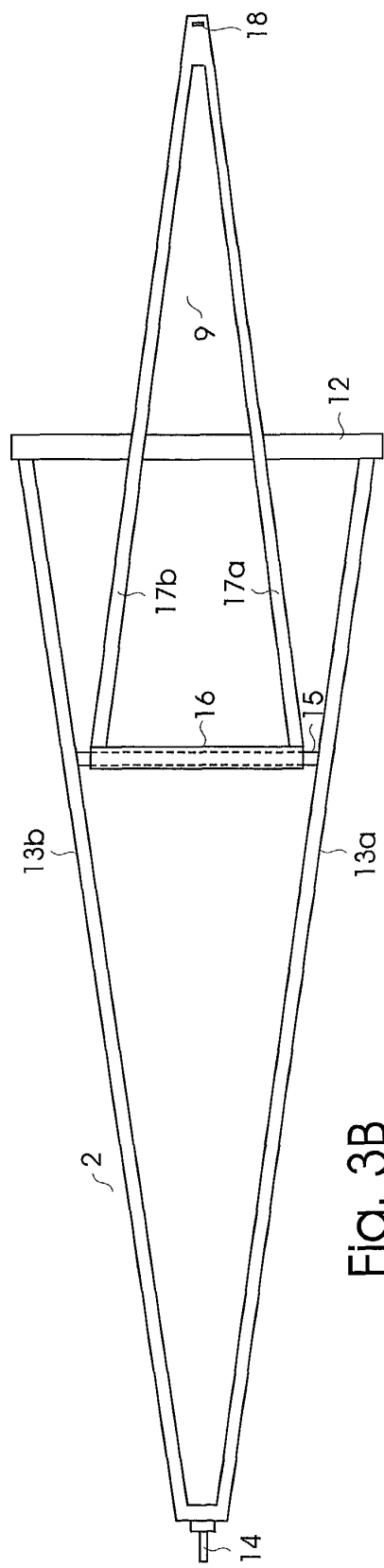


Fig. 3B