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(56) Documents Cited
GB 0864304 A **US 5690457 A** **US 5033170 A**
US 4193413 A **US 4175305 A** **US 3986519 A**
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UK CL (Edition P) E2A AHM
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(54) Abstract Title
Mounting for a tent

(57) A mounting comprising a first member (31) which is attachable to a surface, and a second member (45) being rotatably mounted on said first member (31), wherein the second member (45) has an aperture (47) therein for receiving a tent pole, rope or the like.

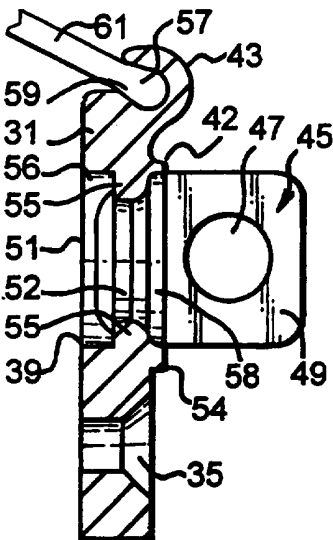


Fig. 4

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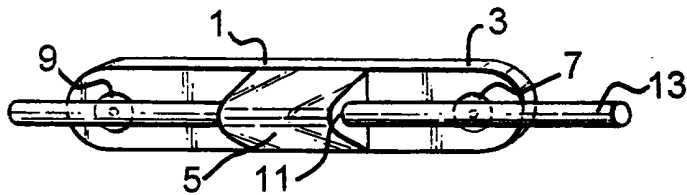


Fig. 1A

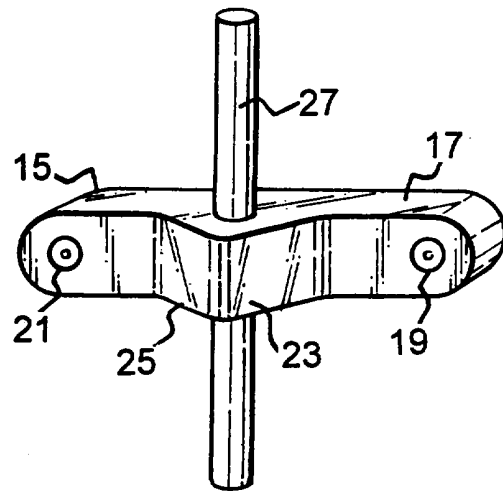


Fig. 1B

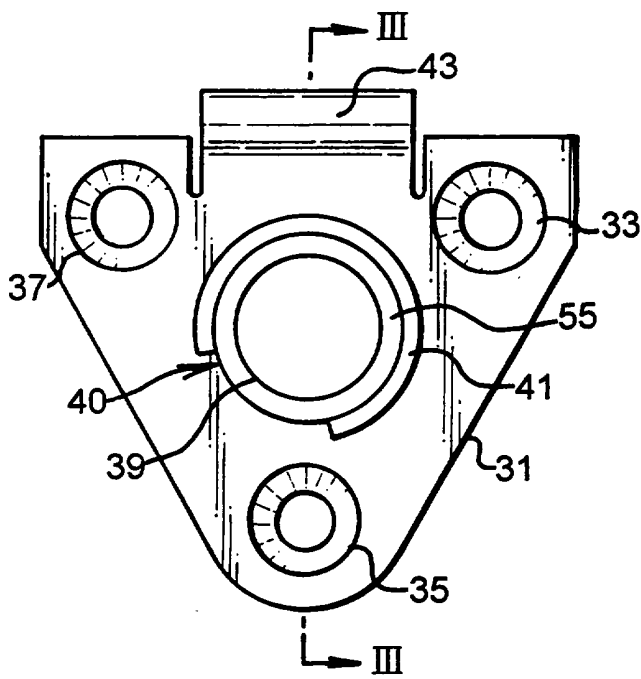


Fig. 2

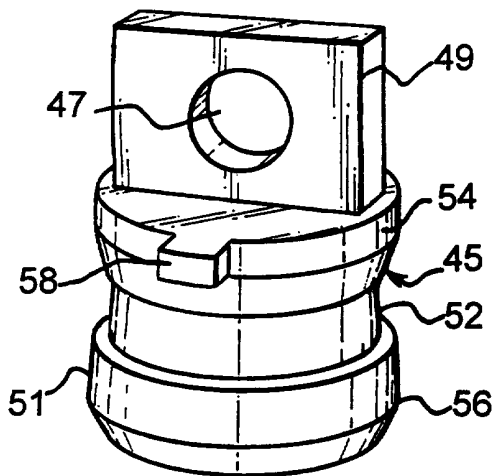


Fig. 3

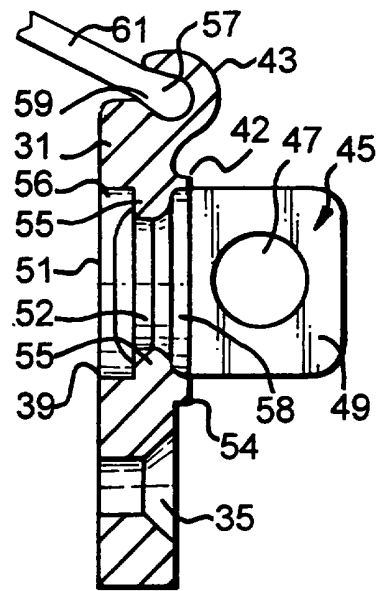


Fig. 4

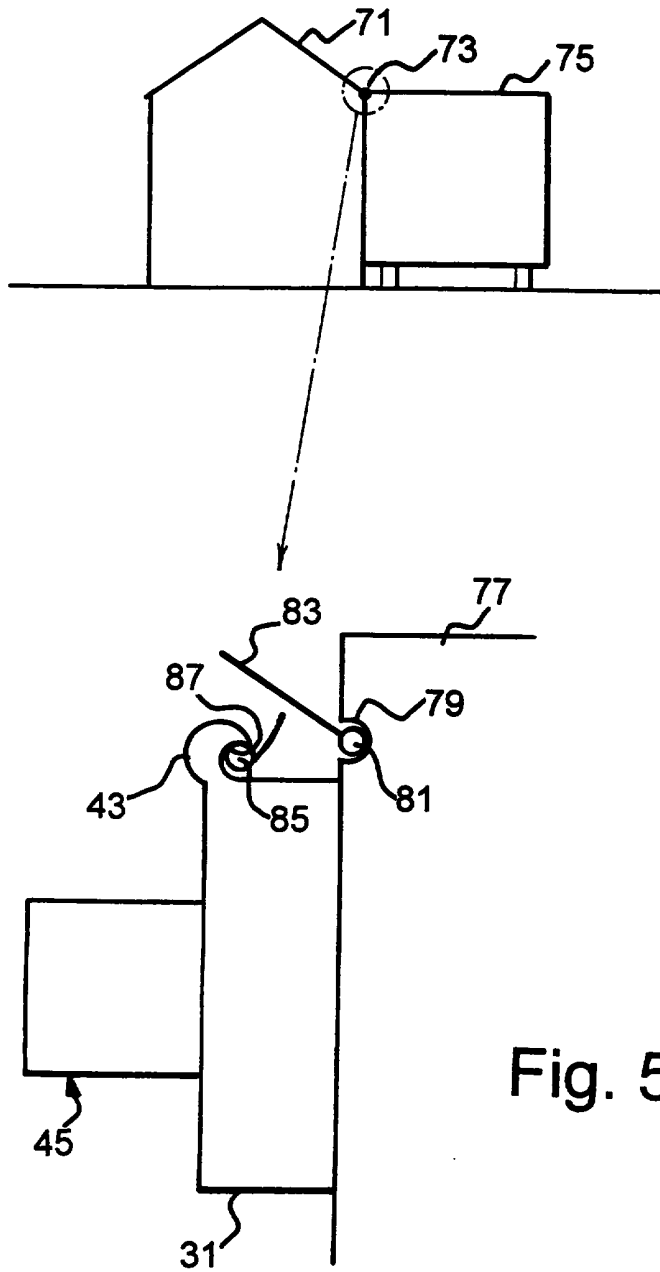


Fig. 5

A Mounting for a Tent

The present invention is concerned with the problems encountered in assembling tents and the like. More specifically, it is concerned with mounting tent poles, ropes etc. in position.

When assembling a tent, the tent poles or ropes must be mounted to the tent fabric and in some cases, the tent poles or ropes are also mounted to some external structure, for example, the side wall of a caravan.

Previously, methods of mounting a tent pole have included using an elongate mounting which is riveted to the tent fabric or wall etc., typically using two rivets. The mounting has an aperture through which the tent pole can be passed. Different types of mounting are available which allow the pole to be oriented, for example, either perpendicular to or parallel to the elongate direction of the mounting.

The above type of mounting has the disadvantage that it is awkward to position the last few poles when assembling a tent, as the relative orientations of the pole and the piece of tent fabric to which the mounting is attached are fixed. Also, different types of mountings have to be manufactured depending on the required orientation of the pole with respect to the elongate direction of the mounting.

The present invention addresses the above problems and, in a first aspect provides a mounting comprising a first member which is attachable to a surface, and a second member rotatably mounted on said first member, wherein the second member has an aperture therein for receiving a tent pole, rope or the like.

It is preferable if the second member is rotatable in the plane parallel to the surface to which the first member is attached.

The mounting may be used to attach tent fabrics to a pole. However, the first member may be attached either fully or partially to the side wall of a caravan or similar structure to receive a pole of an awning or the like.

The first member can be riveted to the fabric or wall, etc.

As the second member can be oriented in a number of different directions with respect to the first member, the tent pole can pull the first member in a number of different directions. A particularly convenient configuration for taking the load in different directions is provided if the first member is substantially triangular in shape.

More preferably, the triangular first member is provided with three mounting holes at the points of the triangle.

It is often not desirable to have the second member capable of rotating fully through 360°. Therefore, it is preferable if a stop is provided to prevent the second member from rotating through an angle greater than a predefined angle. Preferably, this angle is about 90°. This stop can also define two potential pole orientations which are, for example, 90° apart.

If the first member is to be attached to a solid structure such as a wall of a caravan, it may be preferable if the first member also has engaging means for engaging piping which is provided on an edge of the tent fabric.

More preferably, the engaging means comprises a channel capable of receiving the piping. The walls of the cavity may be flexible such that the piping can be inserted into the channel and gripped thereby.

In a second aspect, the present invention provides a mounting for attaching a tent pole to tent fabric, the mounting comprising a first member which is attachable to the tent fabric and a second member which is rotatably mounted on the first member and includes means for holding the tent pole.

The tent pole can be held in the second member in a number of ways, e.g by using bracket or clamp of some type. Ideally, the mounting should be moveable relative to the longitudinal direction of the pole to aid assembly of the tent.

The present invention will now be described by way of example with reference to the accompanying drawings, in which :-

Figures 1A and 1B show a conventional mounting for attaching a tent pole to the tent fabric;

Figure 2 is a plan view of the first member of a mounting in accordance with an embodiment of the present invention;

Figure 3 is a perspective view of the second member of the mounting of Figure 1;

Figure 4 is a cross section of the mounting of Figure 2; and

Figure 5 is a diagram of the embodiment used to fit a tent pole to the tent fabric and the side of a caravan.

Figures 1A and 1B show conventional mountings. The first mounting 1 has an elongate body 3 with a mounting portion 5. The elongate body 3 is attached to the tent fabric via rivets 7, 9. The mounting portion 5 has an aperture 11 extending through it. The aperture 11 extends in a direction parallel to the direction of elongation of the mounting 1. A tent pole 13 can be slid through aperture 11.

In Figure 1b, the mounting 15 again has an elongate body 17 which is attached to the tent fabric via rivets 19, 21. The mounting 15 also has a mounting portion 23 which has an aperture 25 extending through it, transverse to the elongate body 7. A tent pole 27 can be slid into the aperture 25.

Figures 2, 3 and 4 show a mounting forming an embodiment of the invention. The mounting has a first member 31 which is planar and is designed to be attached flat against the fabric of the tent. The first member 31 has a triangular shape and has three rivet holes 33, 35 and 37 at the points of the triangle. In use, the first member will be riveted to the fabric using three rivets through holes 33, 35 and 37.

A circular aperture 39 is provided in the centre of the first member 31. This aperture 39 is designed to receive the second rotatable member which will be described with reference to Figure 3. A stop member 41 is provided around the circumference of aperture 39. This stop member 41 is in the form of a lip 42 which extends approximately 3/4 of the way around the circumference of aperture 39 and prevents second member from rotating through more than 90° as will be described fully hereinafter.

A clip section 43 shown at the top of the member will be described in detail with reference to Figure 4.

Figure 3 shows the second member 45. The second member has a plate 49 which is integral with a base section 51.

An aperture 47 extends through the plate 49. The aperture 47 can receive a tent pole, such that the tent pole (not shown) can slide through the second member..

The base section 51 is a circular cylindrical stub. The cylinder diameter narrows at its middle to form a neck 52. The neck 52 separates the wider upper 54 and lower 56

cylinder portions. A lug 58 is formed on the circumferential surface of the upper cylinder portion 54.

Figure 4 shows a cross section along line III-III of Figure 2 with the second member 45 located in the circular aperture 39 of the first member 31. The aperture 39 of the first member extends through the member and narrows at collar 55.

The second member 45 is located in the first member 31 by snap-fitting, the lower portion 56 of the second member being chamfered and forced through the aperture 39. The collar portion 55, which defines the narrowest part of aperture 39, of the first member 31 is received in the narrow neck portion 52 of the second member 45, such that the second member 45 can rotate relative to the first member 31.

As mentioned above, the lip 42 extends around approximately $3/4$ of the circumference at the top of the aperture 39, leaving a gap 40 which receives the lug 58. Thus the second member 45 can rotate freely for a quarter turn. The lip 42 extends slightly less than $3/4$ of the way around the circumference of the aperture 39 as the actual angle through which the second member can be rotated is defined by the lip 42 and the width of the lip 58. Therefore, to allow the second member to rotate fully through 90° , the lip must extend through slightly less than 270° to compensate for the width of the lug 58.

The clip section 43 has a cylindrical cavity 57. The cavity 57 receives piping 59 which is located on the edge of tent fabric 61. The clip section 43 is particularly used when the first member is mounted to a solid surface such as a caravan wall to attach an awning or the like.

Such an arrangement is shown in Figure 5. A tent extension or awning 71 is shown connected at point 73 to the caravan 75. The tent has two layers of material provided at its edges, both layers are provided with piping 81 and 85.

The caravan wall 77 is provided with a cavity 79 for receiving piping 81 at the edge of the first layer of tent fabric 83. The piping 85 provided on the second layer of tent fabric is located in the channel 87 of the first member 31.

In this arrangement, the first member 31 is attached directly to the caravan wall. The second member 45 is mounted on the first member 31 as shown in Figure 3. The tent fabric is attached to the caravan wall 77 via cavity 79 and piping 81, and the first member 31 via cavity 43 and piping 85.

CLAIMS:

1. A mounting comprising a first member which is attachable to a surface, and a second member rotatably mounted on said first member, wherein the second member has an aperture therein for receiving a tent pole, rope or the like.
2. A mounting according to any preceding claim, wherein the second member is rotatable in a plane substantially parallel to the surface on which the first member is attached.
3. A mounting according to any preceding claim, wherein the first member is substantially triangular in shape.
4. A mounting according to any preceding claim, wherein the first member comprises three or more mounting holes.
5. A mounting according to claim 4 when dependent on claim 4, wherein the three mounting holes are provided at the points of the triangle.
6. A mounting according to any preceding claim, wherein the mounting further comprises a stop means to prevent the second member from rotating through more than a predefined angle with respect to the first member.
7. A mounting according to any preceding claim, further comprising engaging means for engaging piping which is provided on an edge of the tent fabric.
8. A mounting for attaching a tent pole to tent fabric, the mounting comprising a first member which is attachable to the tent fabric and a second member which is rotatably mounted on the first member and includes means for holding the tent pole.
9. A tent including a mounting according to any preceding claim.

10. A mounting as substantially hereinbefore described with reference to Figures 2 to 4 of the accompanying drawings.

11. A tent as substantially hereinbefore described with reference to Figures 2 to 4 of the accompanying drawings.



Application No: GB 9817475.8
Claims searched: 1-7,8,9

Examiner: Philip Silvie
Date of search: 16 December 1998

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK CI (Ed.P): E2A (AHM)
Int CI (Ed.6): A44B (21/00); E04H (15/32, 15/64); F16B (45/00)
Other:

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 0 846 304 A (BRITISH OXYGEN) see figs. 1,2	1,2, at least
X	US 5 690 457 A (RUD) see fig. 3	1,2, at least
X	US 5 033 170 A (EWERT) see fig. 6	1,2,8 at least
X	US 4 193 413 A (AMERICAN ECOSYSTEMS)see figs.5,6	1,2,8 at least
X	US 4 175 305 A (GILLIS) see fig. 1	1,2,8 at least
X	US 3 986 519 A (GILLIS) see col. 2, lines 49-51	1,2,8 at least
X	US 3 863 659 A (GILLIS) see fig. 13	1,2,8 at least

X Document indicating lack of novelty or inventive step	A Document indicating technological background and/or state of the art.
Y Document indicating lack of inventive step if combined with one or more other documents of same category.	P Document published on or after the declared priority date but before the filing date of this invention.
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