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(54) Awning assembly apparatus

(57) FIGURE 7 shows assistance means provided in the form of a pull cord system 3a, handle 3b and awning attachment means 3c, for moving the awning along guide channel G.

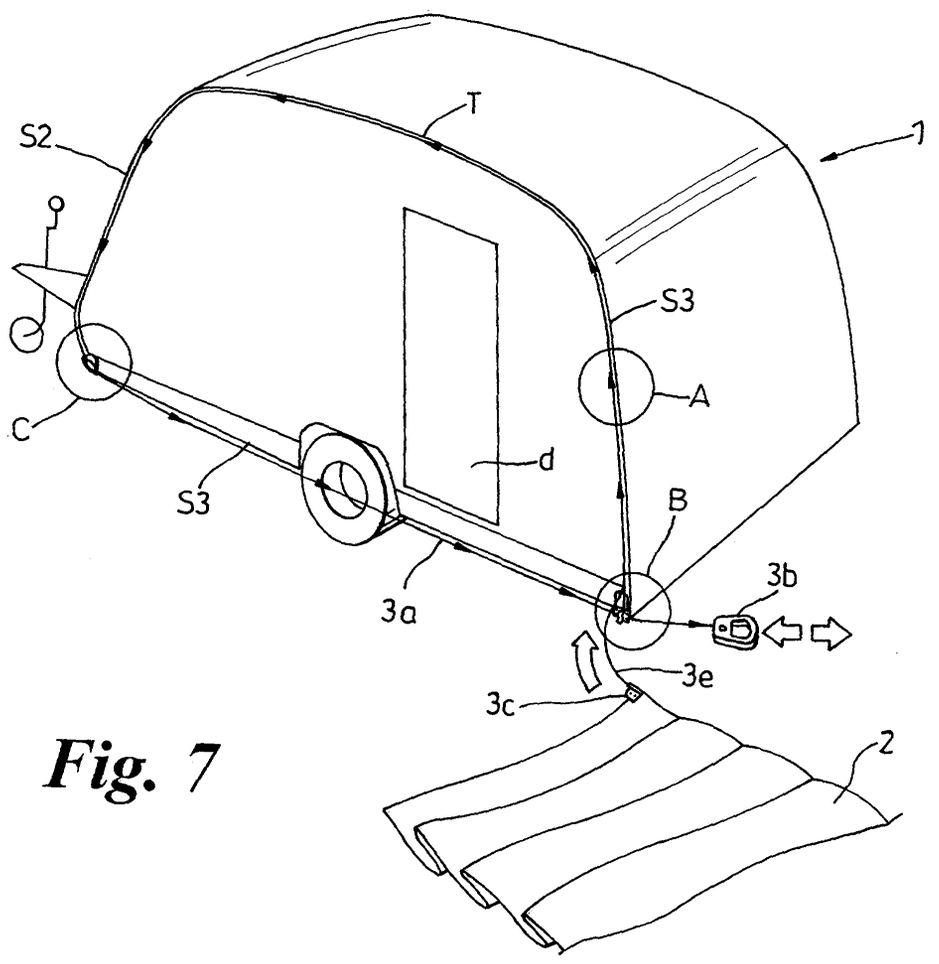

Fig. 7

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Description

[0001] This invention relates to improvements in or relating to caravans and the like and is more particularly but not exclusively concerned with caravan awnings.

[0002] Caravans are known having a peripheral channel extending at least around the periphery of the top and side edges of one side of the caravan on which a caravan door is located. The channel is usually formed as a separate add on extrusion that may be screwed onto the peripheral top and side and edges of one side of the caravan. The extrusion includes a generally C-shaped guide rail into which a connection edge or beading of the awning can be introduced (usually at a lower end of the guide rail on one side edge of the caravan) and pulled manually up and around the channel of the leading side edge and top and down the channel on the opposite side edge of the caravan.

[0003] The manner of attaching a caravan awning to a caravan by threading the awning connection edge or beading at one end of the peripheral channel and pulling it up and around the side caravan is well known and tends to be problematic for several reasons. When erected, the awning will be supported by horizontal telescopic spring loaded poles arranged parallel to one another and extending in a direction transverse of the caravan. The caravan awning itself can be relatively large and bulky and often the erection of the caravan awning on the side of the caravan or retraction thereof needs to be a two-man operation simply because of the difficulty in handling the awning as it is threaded and pulled along the peripheral side channel. It is particularly difficult to perform the task of moving the awning connection edge or beading over the junction from the channel leading side edge onto the channel peripheral top side edge and usually step-ladders or the like may be required so that the person pulling the awning around the channel is sufficiently elevated to be able to perform the task.

[0004] Erection and retraction of the awning may be made all the more difficult where the caravan is parked on an incline and, in practice, the beading of the awning may jam in the channel. In an effort to avoid such jamming, caravan owners may grease the channel, but it believed that this does not entirely alleviate the problem. In order to ease the operation of erecting or attaching the awning correctly to the caravan side, the awning itself requires neat folding to allow same to be paid out smoothly as the beading is threaded through the channel. In practice, once the awning has been erected and retracted a few times it is doubtful that most caravan owners would have managed to arrange the awning in a neat folded fashion ready for erecting the awning again in the required position. Once again, erecting or retracting the awning can be a relatively difficult operation in adverse weather conditions such as in the wind or rain. Where two people attempt to erect the awning, normally one person pulls the awning beading around the channel whilst the other person feeds or pays out the folded awning itself

[0005] Overall, therefore, it is believed that the current operation of erecting or retracting an awning on a caravan side by threading the awning edge or beading into a peripheral channel and manually pulling same around the channel whilst unfolding the awning tends to be a cumbersome operation that could be improved. It is believed that the operation requires a good deal of manual dexterity, is time consuming and usually requires more than one person.

[0006] Accordingly, it is an object of the present invention to at least alleviate one or more of the aforementioned, or other, disadvantages associated with erecting and/or retracting a caravan awning or the like.

[0007] According to the present invention there is provided assistance means for moving a connection edge or beading of an awning along a guide channel on a caravan or trailer or the like.

[0008] Further according to the present invention there is provided a caravan or trailer or the like having assistance means for moving the connection edge or beading of an awning along a guide channel on said caravan, trailer or the like.

[0009] Further according to the present invention there is provided a method of erecting and/or retracting a caravan awning or the like, comprising attaching assistance means to a connection edge or beading of the awning or the like and pulling the connection edge or beading around a guide channel on a caravan or the like using the assistance means.

[0010] The guide channel may extend around the peripheral top and side edges of one side of the caravan, trailer or the like.

[0011] The assistance means, preferably, has a pull cord, cable, line or the like which in one embodiment follows the path of the guide channel and is, preferably, located in the guide channel.

[0012] The assistance means may include running means to allow the pull cord to move or run smoothly relative to the guide channel and said running means may comprise a low friction clip or clips (usually located at an end or each end of the guide channel).The low friction clip or clips could be replaced by a pulley or pulleys. Said running means may be releasably attachable to the caravan, trailer or the like by any suitable means.

[0013] The pull cord/line or the like may be of nylon or other strong low friction material and/or be releasably attachable to an awning, for example by means of an attachment or connection plate releasably attachable to fabric of the awning such as by screws. One end of the pull cord/line or the like may be attached to a tubular portion of the attachment/connection plate that, in use, fits over a beading or edge extension on the awning.

[0014] The assistance means may be manual and/or power driven.

[0015] Where the assistance means includes a pull cord/line or the like as previously mentioned, a handle may be provided for moving the pull cord along the guide

channel to erect and/or retract the awning. Preferably, the pull cord may be wound around a collecting drum on the handle, preferably, by a reciprocating action of the handle in the manner of a 'dog lead'.

[0016] Additionally, or alternatively, the assistance means may include a power reel driven by any suitable power take-off such as an electric drill. In such a scenario, the power reel may by geared and/or the pull cord may be wound on a drum of the power reel during erection of the awning.

[0017] Further according to the present invention there is provided an awning for a caravan, trailer or the like, said awning having a connection edge or beading for introduction into a receiving channel on the caravan, trailer or the like, said awning having assistance means for moving the connection edge or beading along the guide channel.

[0018] Further according to the present invention there is provided a kit of parts for modifying a caravan, trailer or the like, having a guide rail or channel along which a connection or beading of an awning may be threaded, said kit comprising a pull cord attachable to the awning and receivable, in use, along the rail/ channel and comprising running means attachable to the caravan, trailer or the like to allow the pull cord to run smoothly along the rail/channel, and preferably comprising motive means to move the cord along the channel/guide rail, thereby threading the awning connection edge/beading on the channel/guide rail. The motive means may be a handle and/or power drive means.

[0019] Many advantageous features of the present invention will be apparent from the following description and drawings.

[0020] An embodiment of a caravan including assistance means adapted for moving beading of a caravan awning along a guide channel on the caravan in accordance with the present invention will now be described, by way of example only, with reference to the accompanying simplified schematic drawings in which:

FIGURES 1-3 show perspective views in accordance with the present invention of three stages of the attachment of a caravan awning to one side of a caravan;

FIGURE 4 shows a detail of a known guide channel of the caravan;

FIGURE 5 shows a detail of a known connection end of a caravan awning;

FIGURE 6 shows a known cross-sectional view through the side of the caravan and awning in the erected position;

FIGURE 7 shows a view similar to FIGURE 1 showing the overall scheme of threading the awning onto the side of the caravan;

FIGURE 8 shows an enlarged detail of FIGURE 7 corresponding to area A of

FIGURE 7 in which the awning has been partially threaded onto the guide channel;

FIGURE 9 shows a detail corresponding to an area B of FIGURE 7;

FIGURE 10 shows a detail corresponding to area C of FIGURE 7;

FIGURE 11 shows a view corresponding to FIGURE 1 but of a modified embodiment;

FIGURE 12 shows further detailed views of the caravan shown in FIGURE 11;

FIGURE 13 shows modified power driven assistance means adapted for moving the connection edge or beading of a caravan awning along the guide channel of the caravan, and

FIGURE 14 shows a view looking in direction of arrow R on FIGURE 13.

[0021] Referring to FIGURES 1-3 of the drawings, a caravan 1 in accordance with a first embodiment of the present invention has a guide channel G (see FIGURE 4) that extends around the periphery of the top T and sloping side edges S 1 and S2 of the caravan. The peripheral guide channel G is of a generally known form comprising a separate add-on plastics or rubber extrusion. The guide channel G may be screwed onto the peripheral top T and side edges S1 and S2 of one side of the caravan (for example, as shown in FIGURES 1-3) containing the caravan door d (not shown in FIGURES 1 to 3 but shown in FIGURE 7). FIGURE 5 shows schematically a comer C of a known awning 2 (see FIGURES 1-3) having a beading b along one edge thereof and beading extension b' that, in use, can be utilised to slide or locate the beading b into the C-shaped receiving opening G' of the guide channel G (see FIGURE 6).

[0022] As previously stated, the guide channel G shown in FIGURE 4 and the comer C of the awning 2 shown in FIGURE 5 are of generally known form and it is generally known to locate the beading extension b' within the C-shaped opening G' of the guide channel G at the bottom end of the guide channel on the side edge S1, prior to pulling the beading of the awning all the way along the guide channel manually to erect the awning. The dashed lines represent a possible eyelet attachment E which will be described later on in the specification.

[0023] Thus, the guide channel G itself will not be further described other than to say that it is provided with a flange F that may be screwed to the caravan side by screws h (one screw shown in FIGURE 4).

[0024] FIGURE 6 shows a cross sectional view of known form through the caravan 1 and guide channel G and awning 2 in the erected position. FIGURE 6 shows the position of telescopic guide poles P which are of known format and which will not be further described. FIGURE 6 shows a cross section through the attachment side of the awning 2 in which the material 2a of the awning 2 has been wrapped around the beading b and secured thereto (for example by stitching I) in a generally known manner.

[0025] In known arrangements, where the extension

b' to the beading b is located in the C-shaped opening G' in the guide channel G, problems arise in manually pulling the beading b around the guide channel (that may for example be about 12 metres in length).

[0026] FIGURES 1-3 and 7-10 show how this problem may be alleviated.

[0027] FIGURES 1-3 and 7-10 show assistance means 3 (for moving the beading b along the guide channel G) in the form of a pull cord system 3a, handle 3b and awning attachment means 3c.

[0028] The pull cord system 3a has a length of cord threaded through the entire length of guide channel G around the peripheral top T and side edges S1 and S2 and along the bottom side edge S3 (see FIGURE 7). Although not shown, it is possible that a guide channel for the pull cord system 3a may be provided along the bottom side edge S3.

[0029] In this embodiment of the present invention, one free end 3e of the pull cord system 3a is permanently connected to the awning attachment means 3c in the form of an attachment plate (see FIGURE 8 corresponding to detail A of FIGURE 7). FIGURE 8 shows a cross section through a connection between the cord 3a and awning 2 located in channel G when moved over halfway up leading side edge S1. The pull cord end 3e may be fastened to a tubular portion 3f of the attachment plate 3c and secured thereto by any suitable means such as a pin or rivet 3g. The tubular portion 3f of the awning attachment plate 3c may be passed over the beam extension b' and secured to the fabric of the awning by means of screws 3h or by any convenient means. Once the free end of the pull cord 3e has been securely attached to the awning 2 by means of the attachment plate 3c, the cord system 3a can be moved in the direction of the arrows on cord 3a as shown in FIGURE 7 to lift and pull around the awning 2 from the folded position as shown in FIGURES 1 and 7 to the fully erected position as shown in FIGURE 3. The pull cord system 3a is arranged to move throughout the guide channel G in the direction of the arrows shown, on operation of the handle 3b, once the tubular portion 3f of the awning attachment plate 3c has been threaded into fish-mouth m1 of the guide channel G at the bottom of the side edge S 1 (see FIGURE 9).

[0030] FIGURE 9 shows an enlarged detail corresponding to detail B in FIGURE 7. FIGURE 9 shows a low friction clip 5 (releasably attached underneath fish-mouth m1) for the pull cord section 3j adjacent to the handle 3b. Pull cord section 3j can be fitted into the low friction clip 5 under hook part 5a in the direction of arrow X so that the cord can be retained to move correctly and smoothly in alignment, whilst the handle 3b is reciprocated in the direction of the arrows Y and Z to retract one end of the cord 3a into the hollow casing of the handle 3b, in a similar action to a cord retraction dog lead. Since the internal workings of a cord retraction dog lead are well known, in which the cord is wound onto an internal drum, the action of handle 3b to cause retraction of the cord and movement of the cord in the direction of the arrows in an anti-clockwise direction along the peripheral guide channel G will not be further described.

[0031] FIGURE 1 shows a first stage in the erection of a caravan awning 2 in accordance with this embodiment of the present invention. Awning plate 3 is attached to the awning 2 ready for the tubular portion 3f to be engaged in fish-mouth m1 by hand.

[0032] FIGURE 2 shows a midstage in the erection of the awning 2 on the caravan side with the awning 2 having been moved partly along the guide channel G by the reciprocal pull action of the handle 3b as the awning 2 becomes unfolded.

[0033] FIGURE 3 shows a further stage in the erection of the awning, said awning 2 having been threaded along to the far end of the guide channel G prior to telescopic bars P being fitted in place to complete the erection of the awning.

[0034] FIGURE 10 shows an enlarged detail of a releasably attached low friction comer cord clip 6 having curved, tubular channel 6a corresponding to detail C of FIGURE 7, the format of which should be self evident. The low friction action of the clip 6 allows the cord 3a to move smoothly through a right angle. Clip 6 is positioned under fish mouth m2 at the far end of guide channel G.

[0035] Thus, the assistance means 3 comprising the pull cord system 3a, pull handle 3b, and awning attachment means 3c allows the beading b of the caravan awning to be moved smoothly and cleanly along the guide channel G from the bottom of the side edge S 1 to the bottom of the side edge S2 This may be a one man operation, simply by reciprocating the pull cord handle 3b in a manner which should be self evident with one hand, whilst supporting the awning with the other hand, paying the awning out from its folded state until the awning beading has been threaded completely along the guide channel as shown in FIGURE 3.

[0036] The low friction clips 5,6 constitute running means that allows the pull cord system 3a to run smoothly around the guide channel G.

[0037] Once the awning has been erected, when it is desired to detach the awning from the caravan side, the handle 3b can be operated in a similar manner to remove the awning from the guide channel G. The awning can moved to a position in which the tubular portion 3f of the attachment plate 3c can be removed from the bottom of the guide channel prior to the attachment plate being disconnected from the material of the awning 2, ready for the awning to be folded away for use at another time.

[0038] Many other possible modifications or variants are possible whilst retaining the principal of assistance means being provided for moving the caravan awning along the caravan guide channel.

[0039] FIGURES 11 and 12 show a slight modification to the arrangement shown in FIGURES 1-3, 7-10, in which guide pulleys p1,p2 are provided at the openings of the guide channel G at the bottom of the side edges

S1 and S2, said guide pulleys p1,p2 replacing the low friction clips 5 and 6 but serving a similar function enabling the smooth running of the cord system 3 a.

[0040] Additionally, It is possible that threading of the beading b or connection edge of the awning 2 in the guide channel opening G' may be accomplished by power driven means such as an electric motor, for example of a drill 108 (see FIGURE 13).

[0041] Accordingly, FIGURE 13 shows the end 3j of the pull cord system 3a being connected to a boss 100 by means of a piece of flat tape 101, said boss being locatable into a slot 102 on a power reel 103 in a manner which should be self-explanatory. The power reel 103 may be connected to the existing guide rail G replacing the guide pulley assembly p1 shown in detail A in FIGURE 11. The power reel 103 may include a simple spur gear 104 and a cable collector drum 105, said spur gear 104 meshing with a driving gear 106 that may be driven in a manner which should be self explanatory by a power drill attachment 107 connected to power drill 108 (only part of which is shown in FIGURE 13). The spur gear 104, cable collector drum 105 and driving gear 106 may be covered for safety by any suitable (plastics) covering 109 depicted in dashed lines.

[0042] FIGURE 14 illustrates in more detail the action of the power reel, the content of which should be self-explanatory.

[0043] Any alternative power means may be provided to erect or retract the awning on the side of the caravan.

[0044] The pull cord system 3a may be removed from the channel G with the handle 3b whilst the cord is still attached to the awning 2, so that the attachment plate 3c and cord and handle may remain attached to the awning while it is stored away. Alternatively,, the cord system 3a could remain on the caravan 1 and the awning detached from plate 3c.

[0045] It is believed that the first described embodiment shown in FIGURES 1 to 3, 7 to 10 having low friction cord clips 5,6 is advantageous over the embodiment shown in FIGURES 11 and 12 having pulleys p1,p2. This is because, once the cord system 3a is removed from the caravan 1, the pulleys, if left on the caravan may look much more unsightly than cord clips 5,6 if not removed from the caravan, It is possible in a further embodiment that one friction clip 5,6 be employed with one pulley p1,p2.

[0046] It is to be appreciated that the present invention offers many improvements, at least some of which might be patentable individually or in combination. Any individual feature as aforementioned or as shown or implicit herein or combinations thereof, or functions or methods appertaining thereto, may be patentably inventive and any specific term as used herein should not be construed as unnecessarily or unduly limiting; the scope of such a term should extend to, or may be replaced or supplemented by, any equivalent or generic expression. For example, the phrase 'assistance means' may be replaced by 'threading device' or 'thread assistance means' or 'apparatus adapted for' or 'apparatus for'; 'guide channel' may be replaced by 'guide rail'. Additionally, any range mentioned herein for any parameter or variable shall be taken to include a disclosure of any derivable sub-range within that range or of any particular value of the variable or parameter arranged within, or at an end of, the range or sub-range. The singular may include the plural and vice versa.

[0047] If desired, the connection of the assistance means to the awning may be modified in any suitable way. For example the beading extension b' may be co-operable with an eyelet E (see dashed lines in FIGURE 5) that may be attached to the assistance means.

[0048] The format of the guide channel/rail may be varied to suit and need not be a channel shape. It is possible that a channel shaped or hook-shaped connection edge may be provided on the awning co-operable with a bar-shaped or I-beam shaped guide rail on the caravan.

[0049] Although the present invention has been presented in relation to assistance means or apparatus adapted for moving or pulling the connection edge or beading of a caravan awning along a guide channel on a caravan or the like it is possible the present invention may have a use in other fields or instances where a connection edge needs to be threaded along a guide rail or channel, for example, on the side wall of a structure other than a caravan or the like, such as on a fixed building.

[0050] An advantage of the apparatus/ assistance means as herein described is that the awning can be erected readily by one person and that person is able to stand at one location paying out the awning (whilst operating the apparatus/ assistance means) rather than walking along the side of the caravan, trailer or the like whilst pulling the beading/connection edge of the awning along the guide channel.

Claims

1. Apparatus adapted for moving a connection edge or beading of an awning along a guide channel on a caravan or trailer or the like.

2. Apparatus as claimed in claim 1 for pulling the connection edge or beading of the awning along the guide channel, whilst the operator can remain at one location.

3. Apparatus as claimed in claim 1 or claim 2 having a pull cord, cable, line or the like.

4. Apparatus as claimed in claim 3 in which the pull cord, cable, line or the like follows the path of the guide channel, in use, and, preferably in which the pull cord, cable, line or the like is located in the guide channel, in use, and preferably including running means to allow the pull cord, cable, line or the like

to move or run smoothly relative to the guide channel and preferably in which said running means comprises a low friction clip or clips which may be located at an end or each end of the guide channel, in use, or in which the running means is a pulley or pulleys and preferably in which said running means is releasably attachable to the caravan, trailer or the like and, preferably, in which the pull cord, cable, line or the like is of nylon or other strong low friction material and, preferably, in which the pull cord, cable, line or the like is releasably attachable to an awning e.g. by means of an attachment or connection plate releasably attachable to fabric of the awning such that, preferably, one end of the pull cord, cable, line or the like is attached to a tubular portion of the attachment/connection plate that, in use, fits over a beading or edge extension on the awning.

5. Apparatus as claimed in any one of the preceding claims which is manual and/or power driven.

6. Apparatus as claimed in Claim 3 or any claim dependent therefrom in which a handle is provided for moving the pull cord, cable, line or the like along the guide channel to erect and/or retract the awning and, preferably, in which the pull cord, cable, line or the like can be wound around a collecting drum on the handle, preferably, by a reciprocating action of the handle or including a power reel driven by a power take-off such as an electric drill and in which, preferably, the power reel is geared and/or the pull cord/ line or the like can be wound on a drum of the power reel during erection of the awning.

7. A caravan or trailer or the like having apparatus as claimed in any one of the preceding claims and, preferably, in which the guide channel extends around the peripheral top and side edges of one side of the caravan, trailer or the like.

8. An awning for a caravan, trailer or the like, said awning having a connection edge or beading for introduction into a receiving channel on the caravan, trailer or the like, said awning having apparatus adapted for moving the connection edge or beading along the guide channel and, preferably, in which the apparatus is as claimed in any one of claims 1 to 6.

9. A kit of parts for modifying a caravan, trailer or the like, having a guide rail or channel along which a connection or beading of an awning may be threaded, said kit comprising a pull cord, cable, line or the like attachable to the awning and receivable, in use, along the rail/ channel and comprising running means attachable to the caravan, trailer or the like to allow the pull cord, cable, line or the like to run smoothly along the rail/channel and, preferably, comprising motive means to move the pull cord, cable, line or the like along the channel/guide rail, thereby threading the awning connection edge/ beading on the channel/guide rail and, preferably, in which the motive means is a handle and/or power drive means.

10. A method of erecting and/ or retracting a caravan awning or the like, comprising attaching apparatus to a connection edge or beading of the awning or the like and pulling the connection edge or beading around a guide channel on a caravan or the like using the apparatus and, preferably, in which the apparatus is as claimed in any one of Claims 1 to 6.

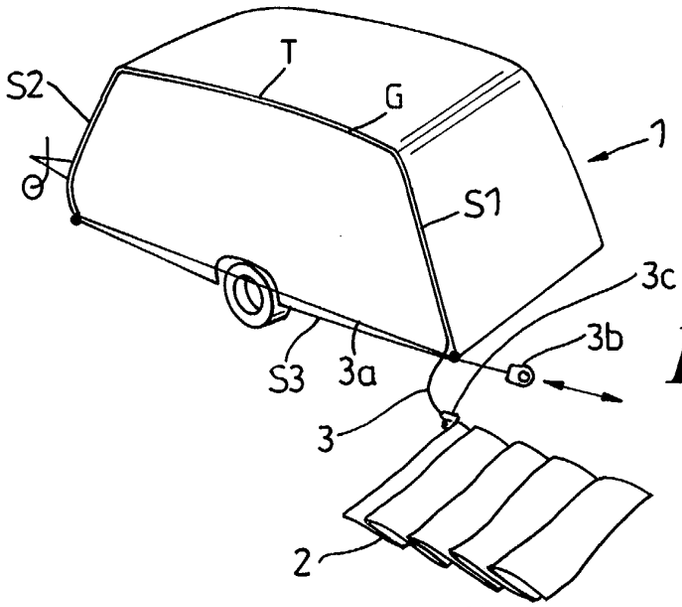

Fig. 1

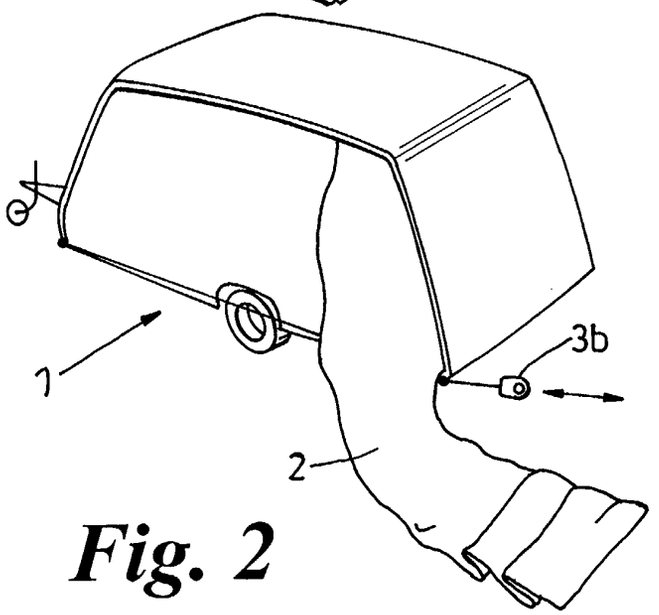

Fig. 2

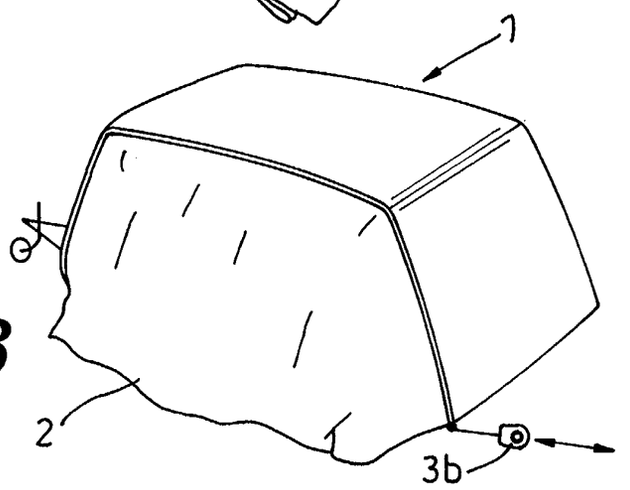

Fig. 3

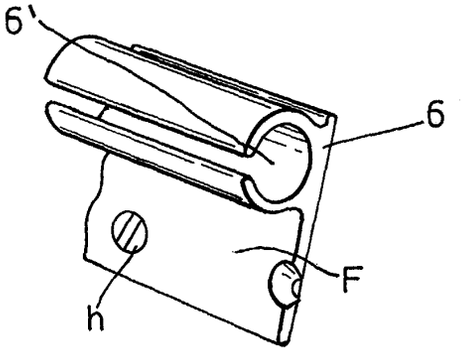

Fig. 4

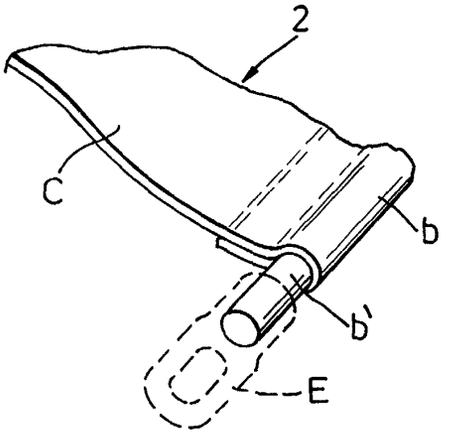

Fig. 5

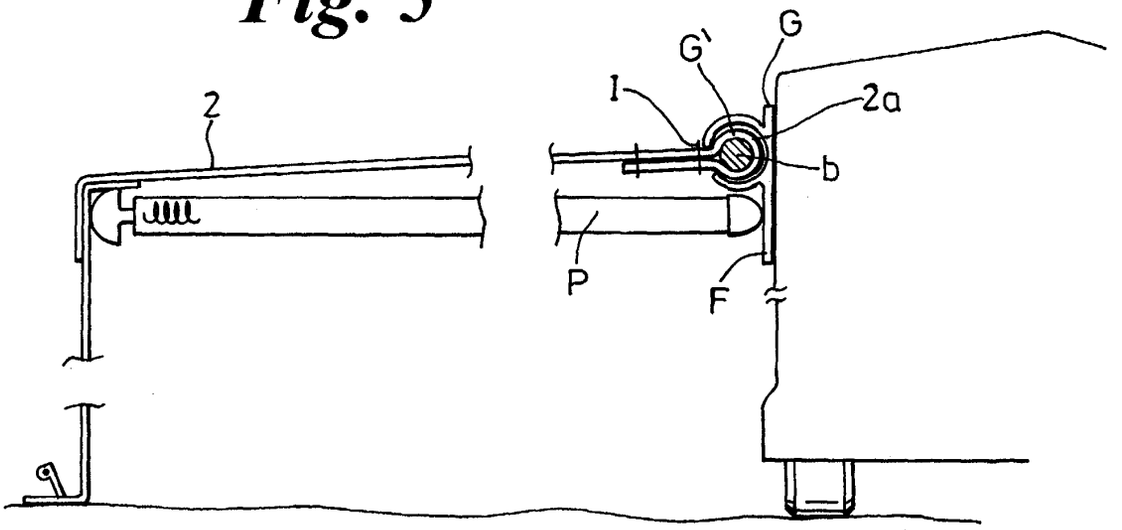

Fig. 6

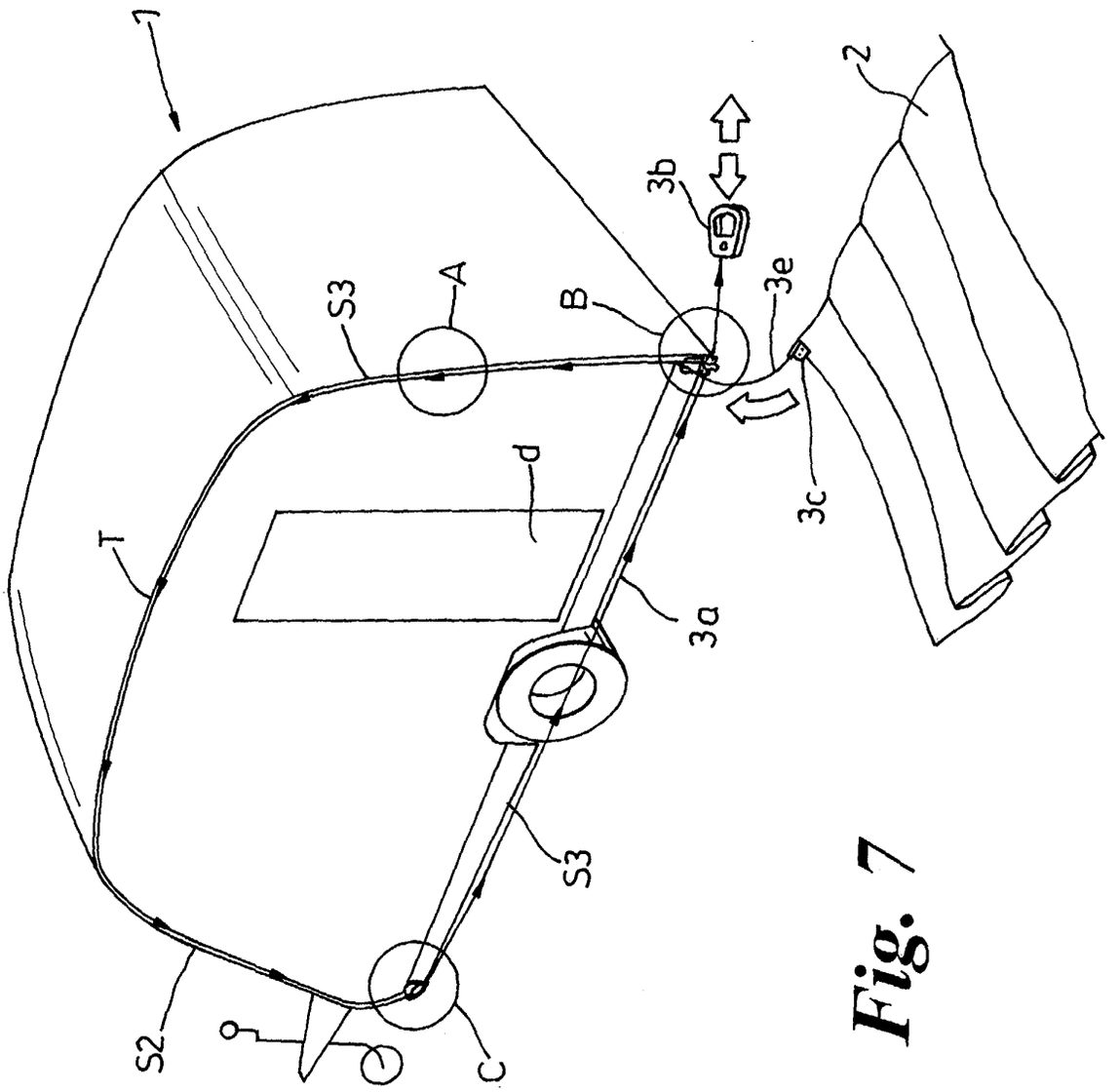

Fig. 7

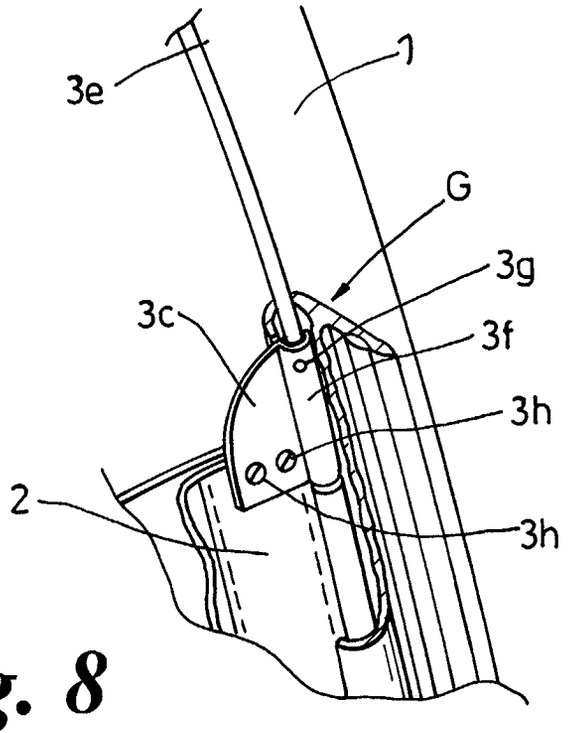

Fig. 8

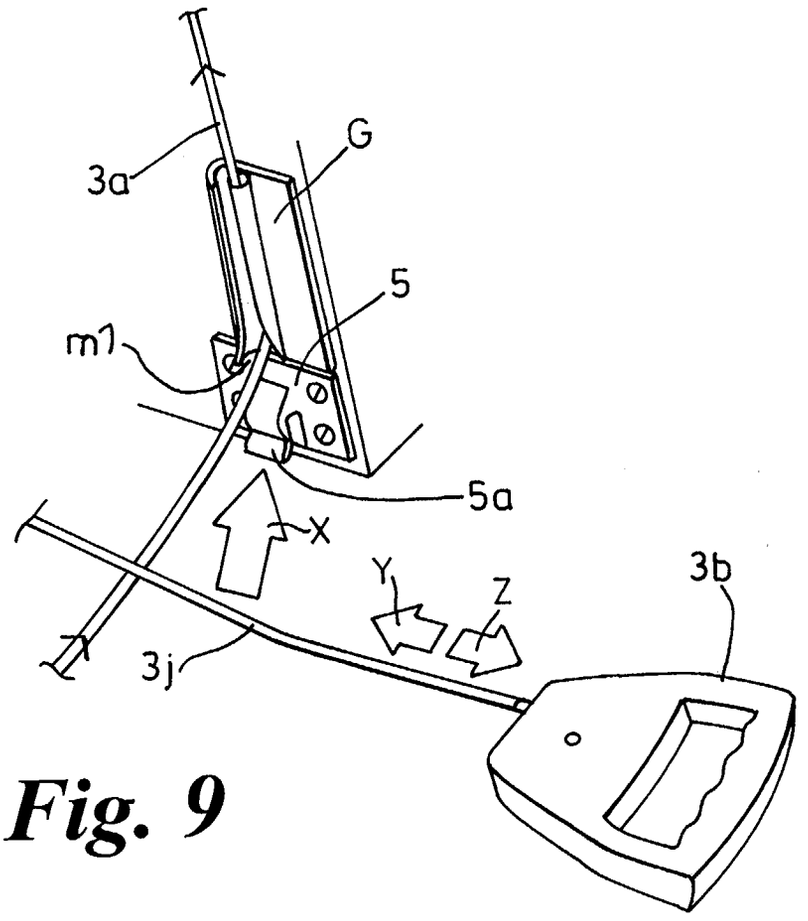

Fig. 9

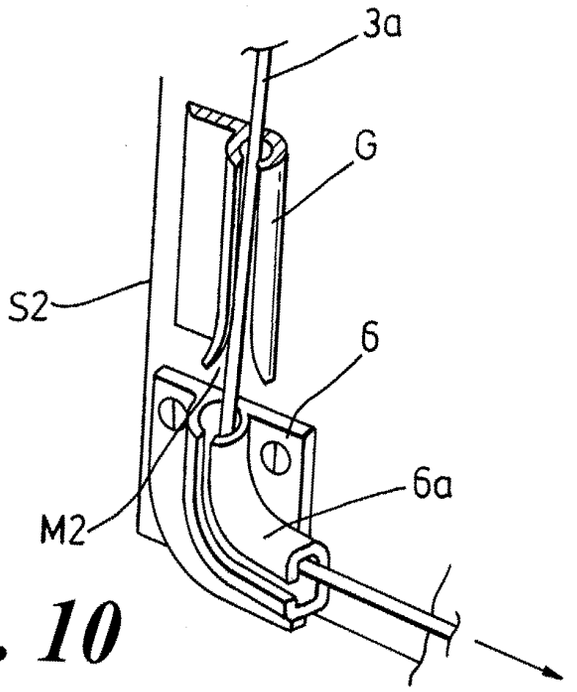

Fig. 10

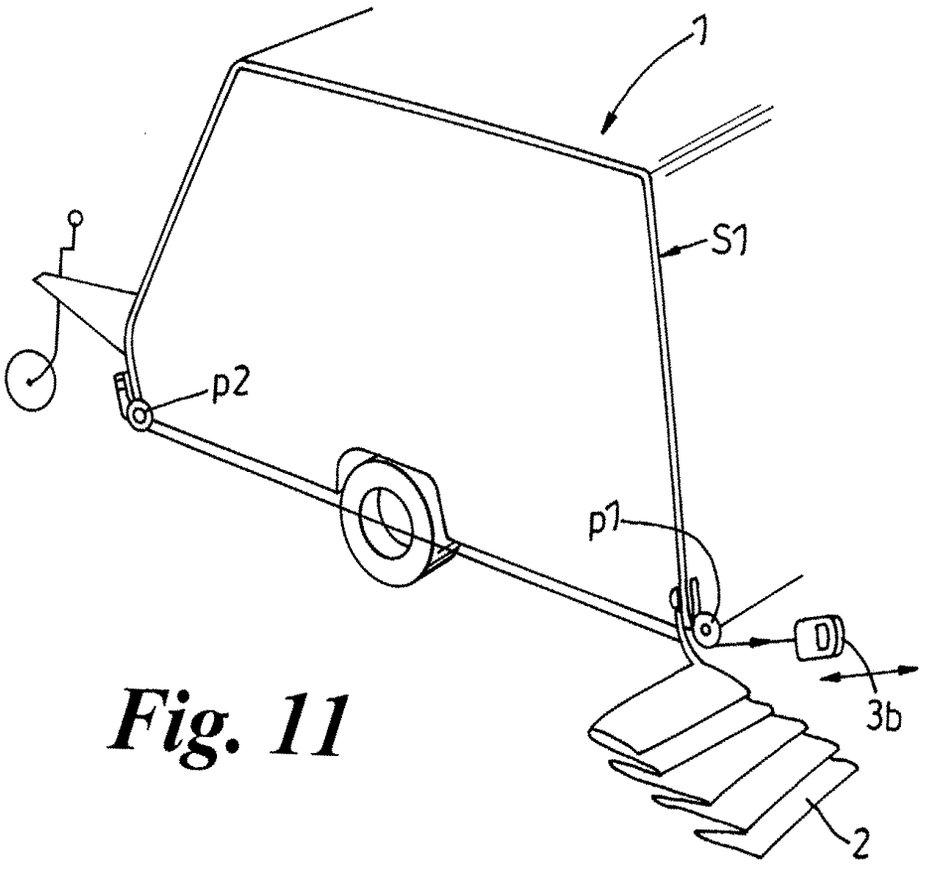

Fig. 11

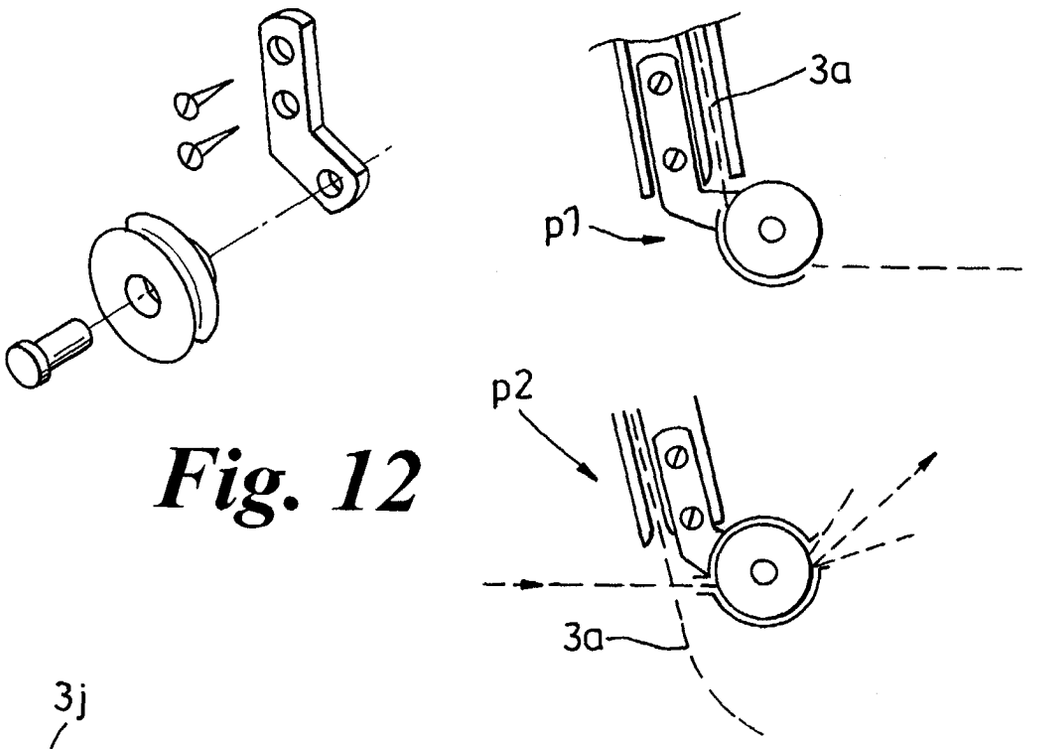

Fig. 12

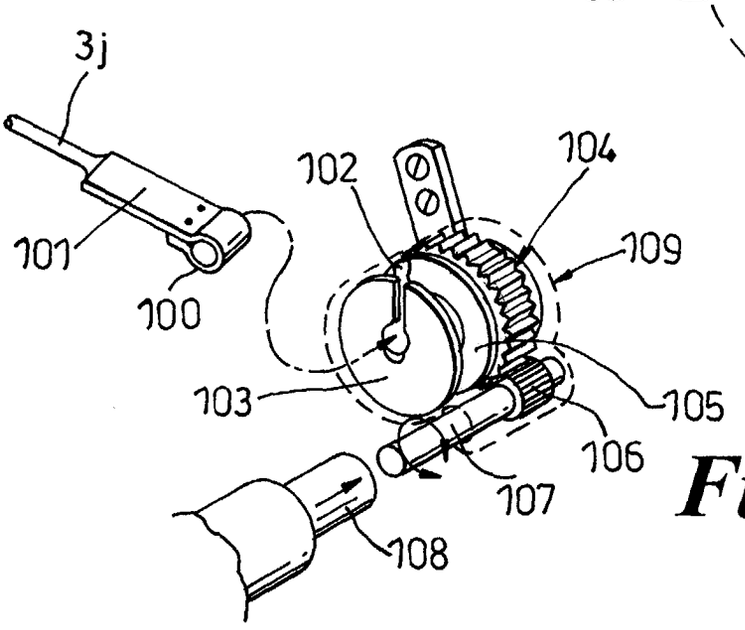

Fig. 13

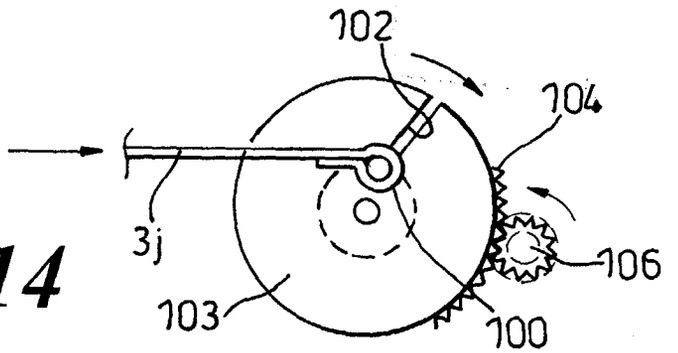

Fig. 14

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EUROPEAN SEARCH REPORT

Application Number
EP 04 25 5480

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	16 December 2004	Stefanescu, R

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