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(54) Bracket for a clothes line cover

(57) A bracket 1 for mounting a clothes line cover on a clothes line arm has an upper part 5 and a lower part 2 with releasable connecting means 6 therebetween. When a predetermined force is applied to the upper part 5, the two parts 2,5 separate. The bracket 1 can include a clamping device 12 comprised of a pair of jaws 13,14 for retaining the cover.

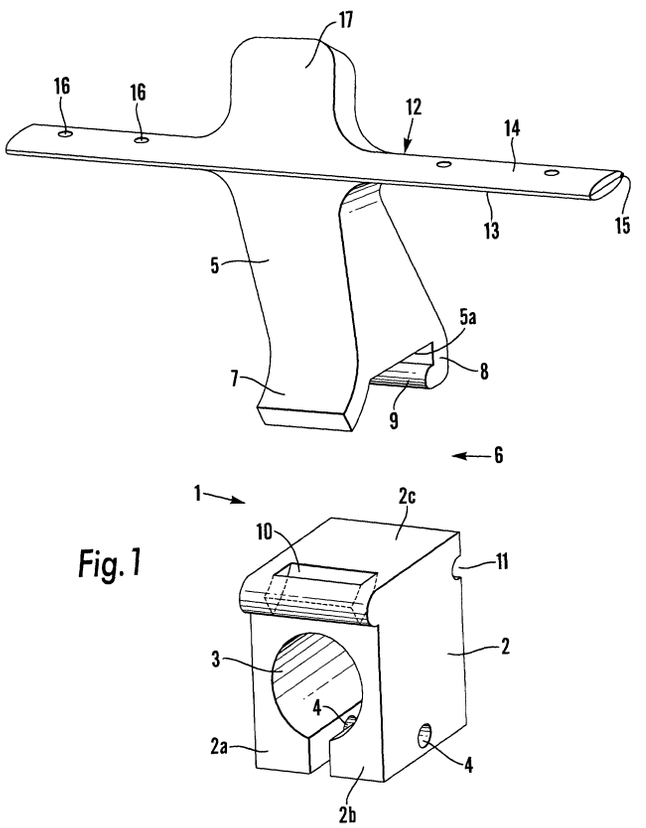

Fig. 1

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Description

[0001] This invention relates to apparatus.

[0002] In one known form of cover for a rotary clothes line the cover is mounted over the rotary clothes line by having a fixing bracket secured to each of the outwardly projecting arms of the rotary clothes line, with each of these brackets serving as a locator for a rod or spar which is coupled to the cover itself. The brackets are customarily made to be a snap fit onto the rotary arms. The brackets can be so designed that if the cover has a large force exerted on it, for example in high winds, the brackets will become unfixed from the rotary arms before those rotary arms suffer damage. Such a bracket is disclosed in W095/01476. However this bracket could be improved in a number of ways.

[0003] According to a first aspect of the present invention, there is provided a mounting bracket for mounting a clothes line cover on a clothes line arm, said bracket being comprised of an upper part and a lower part, said upper part having retaining means whereby said upper part is attachable to said cover, said lower part having anchoring means whereby said lower part is anchorable to said arm, characterised in that said upper part and said lower part have therebetween releasable connecting means whereby, with said cover attached to said arm by way of said bracket and when a predetermined force is applied to said upper part, said upper part is released from said lower part which remains anchored to said arm.

[0004] Owing to this aspect of the invention, it is possible to design the releasable connecting means without being restricted by the form of the arm, as is the case with the bracket of W095/01476, and thus the optimum design and action of the releasable connecting means can be provided.

[0005] According to a second aspect of the present invention, there is provided a mounting bracket for mounting a clothes line cover on a clothes line arm, characterised in that said bracket includes a clamping device comprised of a pair of jaws of which at least one is openable and closable to receive an edge zone of said cover and to clamp said edge zone.

[0006] Owing to this aspect of the invention, whereby the jaws can grip and retain the cover between them, mounting of the cover over a spider of arms is made easier.

[0007] According to a third aspect of the present invention, there is provided a mounting bracket for mounting a clothes line cover on a clothes line arm, characterised in that said bracket is provided with a recess to receive an elongate member for mounting said cover, and said bracket extends around more than 180° of said recess.

[0008] Owing to this aspect of the invention, whereby the bracket can grip and retain the elongate member that mounts the cover, mounting of the cover over a spider of arms is made easier.

[0009] According to a fourth aspect of the present invention, there is provided, a combination comprising a mounting bracket for mounting a clothes line cover, a clothes line arm, and a transverse member for locking said bracket to said arm, said bracket being provided with a cut-out below said arm, said cut-out being arranged to receive said member and to allow release of said bracket from said member and thus from said arm, when a predetermined force is applied to said bracket, characterised in that said cut-out has one or more of the following features:-

(i) an outwardly diverging mouth;
(ii) a generally curved form extending around an axis of turning of said bracket relative to said arm under said force; and
(iii) embracing more than 180° of said member.

[0010] The cut-out does not need actually to be cut out from the bracket but is preferably moulded into the bracket which is advantageously a one-piece moulding.

[0011] Owing to this aspect of the invention, by means of these features it is possible to provide a bracket that can release from the clothes line arm without portions of the bracket bounding the mouth of the cut-out requiring to be deformed by the transverse member as the bracket is released from the transverse member, and to restrain the elongate member from falling out of the cut-out.

[0012] According to a fifth aspect of the invention, there is provided a mounting bracket for mounting a clothes line cover on a clothes line arm, said bracket having a channel bounding legs, characterised in that said channel, in a section taken in an upwardly extending plane progressing from the mouth of said channel, includes a substantially circular portion for closely receiving a clothes line arm of substantially circular cross-section followed by a substantially rectangular portion for closely receiving a clothes line arm of substantially rectangular cross-section.

[0013] Owing to this aspect of the invention, the mounting bracket can be fitted selectively to a clothes line arm of circular cross-section or a clothes line arm of rectangular cross-section.

[0014] According to a sixth aspect of the present invention, there is provided a kit comprising a bracket for connecting a clothes line cover to a clothes line arm, and a plurality of channelled inserts of channel cross-sections differing from each other for fitting in said bracket for accommodating respective clothes line arms of differing cross-sections.

[0015] Owing to this aspect of the invention, it is possible to provide a kit that can be used to make a bracket that can fit any cross-section of clothes line arm.

[0016] In order that the invention may be clearly and completely disclosed, reference will now be made, by way of example, to the accompanying drawings, in which:

Figure 1 is a diagrammatic perspective view of a bracket of a bracket device for attaching a cover to an arm of a rotary clothes line,

Figure 2 is a front view of the bracket of a modified version of the bracket device,

Figure 3 is a side view of the modified version of the bracket device,

Figure 4 is a fragmentary front view of another modified version of the bracket device, and

Figures 5 and 6 are front views of inserts that can be fitted into a bracket body of the device of Figure 4.

[0017] Referring to Figure 1, the bracket 1 includes a lower part 2 designed to be fitted onto a projecting arm of a rotary clothes line (not shown). For that purpose the part 2 includes a pair of resilient legs 2a, 2b which define a channel 3 to house the supporting arm (not shown). The channel 3 is so shaped as to receive a circular cross-section arm (although it could additionally or alternatively be so shaped as to receive a rectangular cross-section arm) and to have a substantial surface area to grip the arm. Each of the legs 2a and 2b is provided with a horizontal through bore 4 which receives a transverse member in the form of a fastening bolt (not shown) of the bracket device. By tightening a nut on the bolt, the lower part 2 can be tightened onto the supporting arm. This gives a secure anchoring for all conditions of use.

[0018] The bracket 1 further includes an upper part 5 and there is, between the lower part 2 and the upper part 5 a releasable connection 6. The connection 6 includes two tongues 7 and 8 extending from respective edges of a substantially flat underneath surface 5a of the part 5, these edges being respectively radially inner and radially outer with respect to the middle of the rotary clothes line. Each of the tongues 7 and 8 curves downwardly and inwardly, roughly parallelly to each other, the tongue 7 being of substantially constant cross-section, but the tongue 8 being formed with an inwardly projecting rib 9 at its free edge. The releasable connection 6 also includes a slot 10 at the radially inner and a groove 11 at the radially outer sides of the part 2. The slot 10 is of rectangular cross-section of a size relatively closely to receive the tongue 7 and is of a curved form to correspond to the curved shape of the tongue 7. The groove 11 is of a U-shaped cross-section corresponding to that of the rib 9 and is disposed at a distance from a substantially flat top surface 2c of the part 2 substantially equal to the distance at which the rib 9 is spaced from the surface 5a. Towards its upper end, the part 5 includes a clamping device 12 comprised of a lower jaw 13 and an upper jaw 14 interconnected at their radially outer edge by a hinge 15. The jaws 13 and 14 protrude laterally to a significant extent and both extend across the whole width of the part 5. The clamping device 12 further includes screws 16 for fastening the jaws 13 and 14 together and an upward termination 17 providing a handle for swinging the part 5 inwardly or outwardly relative to the part 2.

[0019] The purchaser of the cover and mounting bracket arrangement for a rotary clothes line would first fit a plurality of parts 2 onto the ends of the arms of his rotary clothes line and clamp them to the arms by means of nut-and-bolt devices. To fit the cover to an open rotary clothes line with the parts 2 fitted, the purchaser will first fit the upper parts 5 to respective edge zones of the cover by opening each clamping device 12 of each part 5 and fitting the respective edge zones of the cover thereto and closing the jaws and tightening screws 16. If the cover is so designed, the screw 16 can pass through holes in that cover. Then the tongue 7 of a first of the parts 5 is inserted into the top of the slot 10 of one of the parts 2 and is swung downwardly and radially outwardly to cause the rib 9 to ride down the radially outer surface of the part 2 until it snaps into the groove 11, with the surface 5a coming to rest at or immediately above the surface 2c. This procedure is repeated for a second upper part 5 and a second lower part 2, and so on, until the cover is fully laid over the rotary clothes line. An advantage of progressively connecting the upper parts 5 to the lower parts 2 with the cover already attached to the parts 5 and the parts 2 already anchored to their arms is that the parts of the cover which are progressively anchored remain anchored whilst further parts thereof are anchored.

[0020] In the event of a greater than predetermined force being exerted upwardly and radially inwardly on any one of the upper parts 5, particularly if a high wind blows to beneath the cover so that the upper parts 5 are pulled upwardly and inwardly, then the rib 9 rides out of the groove 11 and beyond the surface 2c, while the tongue 7 withdraws from the slot 10, so that the part 5 is released from the part 2, which remains anchored to the arm.

[0021] A particular advantage of forming the bracket 1 in upper and lower parts 2 and 5 is that the releasable connection 6 can be designed without any constraints being imposed by the form of the arm. Moreover, the anchoring of the bracket to the arm can be designed without any constraints being imposed by any necessity for it to be releasable. Moreover, the parts 5 can be identical to each other irrespective of whether the parts 2 need to be a variety of shapes to match varieties of shapes of arm.

[0022] Additionally or alternatively to the cover being attached to the upper parts 5 by clamping devices such as 12, the cover could be sewn or otherwise attached to the part 5.

[0023] Another advantage of the bracket shown is that, when the cover is to be dismounted, particularly when the rotary clothes line is to be folded up for storage or carrying, the upper parts 5 can simply be released from the lower parts 2 and then the arms folded up, with the parts 2 remaining permanent fixtures on the arms. The parts 2 are advantageously sufficiently small that

they do not obstruct full folding-up of the arms. When the cover is to be re-mounted on the rotary clothes line, the parts 5, to which the cover has remained attached, are simply re-mounted onto the parts 2.

[0024] Referring next to the version shown in Figures 2 and 3, the bracket 1 is again designed to be fitted onto a projecting arm of a rotary clothes line and provided with a pair of resilient legs 2a, 2b which define a channel 3 to house the supporting arm (not shown). The channel 3 is so shaped as to receive selectively a rectangular cross-section arm or a circular cross-section arm and to have a substantial surface area to grip the arm, whichever shape the arm is. The channel 3 in a section taken upwardly from the mouth includes a circular portion 3a for closely receiving a clothes line arm of substantially circular cross-section followed by a rectangular portion 3b for closely receiving a clothes line arm of substantially rectangular cross-section.

[0025] As shown in Figure 3, each of the legs 2a, 2b is provided with a cut-out 24 which has a diverging mouth and, inwardly of the mouth, a portion that grippingly embraces more than 180° around a transverse member in the form of a fastening bolt 25 which is positioned with the bolt 25 extending through the cut-outs 24. By tightening a nut on the bolt, the bracket 1 can be tightened onto the supporting arm. This gives a sufficiently secure fastening for normal conditions of use.

[0026] The bracket 1 includes a recess 26 at the end remote from the supporting arm and at the side of the bracket remote from the cut-outs 24. This recess 26 has lips 27 that can hold a supporting elongate member (not shown) in the form of a rod or stay for the cover for the rotary clothes line. The lips 27 ensure that the recess grippingly embraces more than 180° of that rod or stay. Alternative arrangements for gripping the rod or stay are possible. For example, the bracket 3 could be provided with a groove on its top for receiving the rod or stay with clips that then can be closed to encircle totally the rod or stay. Alternatively, the bracket 3 could simply have a hole through it that the rod or stay could be threaded through.

[0027] These arrangements have the advantage of retaining the rod or stay in the recess or groove and also facilitate the user putting a clothes line cover on before the spider is opened out as the rods or stays of the cover will be held firmly in place.

[0028] In the event of severe stress being exerted on the cover and thus on the surface of the recess 26, for example because of extremely windy conditions, the resultant force exerted by the arm on the bolt 25 will spring the bolt 25 free from the cut-outs 24 and enable the bracket to come free from the supporting arm and thus avoid damage to the structure of the rotary clothes line itself.

[0029] The cut-out 24 is so shaped with its diverging mouth that, as the bracket 1 breaks free from the bolt 25, the body of the bracket 1 does not restrain the bolt from being released. The cut-out 24 is shown as extending in a generally downwards direction; alternatively it could be so shaped that the cut-out 24 extends generally backwards i.e. to the left in Figure 3. The cut-out 24 has a generally curved shape, so designed to follow the path that the bolt 25 would make when it breaks free from the body of the bracket 1, thereby not blocking the path of the bolt 25 when it is ejected. The generally curved shape of the cut-out 24 extends around an axis of turning of the bracket 1 relative to the arm under the force exerted by the cover on the bracket 3 during extremely windy conditions.

[0030] In the bracket device of Figure 4, the channel 3 is designed to receive the largest cross-section of arm that is commercially available. Either of inserts 30 and 31 can be fitted into the channel 3 in order to allow the bracket to be fitted to an arm of a smaller rectangular or circular cross-section. The external shape and size of the insert 30 or 31 is of the same shape and size as the channel 3. The bracket 1 is provided with a bolt 25 and wing-nut 33 that can be tightened to retain any insert in place in the bracket 1 and on the arm.

[0031] It will be appreciated that the feature of the recess 26 and the lips 27 is applicable as an alternative to the clamping device 12 of the bracket of Figure 1. Likewise, the concept of the inserts 30 and 31 is also applicable to the bracket of Figure 1.

Claims

1. A mounting bracket (1) for mounting a clothes line cover on a clothes line arm, said bracket (1) being comprised of an upper part (5) and a lower part (2), said upper part (5) having retaining means (12) whereby said upper part (5) is attachable to said cover, said lower part (2) having anchoring means (2a,2b) whereby said lower part (2) is anchorable to said arm, characterised in that said upper part (5) and said lower part (2) have therebetween releasable connecting means (6) whereby, with said cover attached to said arm by way of said bracket (1) and when a predetermined force is applied to said upper part (5), said upper part (5) is released from said lower part (2) which remains anchored to said arm.

2. A bracket according to claim 1, wherein said releasable connecting means (6) is in the form of a clip (6).

3. A bracket according to claim 2, wherein said clip (6) comprises a tongue (7) on one of said upper part (5) and said lower part (2) for releasably engaging in a slot (10) on the other of said upper part (5) and said lower part (2).

4. A bracket according to claim 2 or 3, wherein said clip (6) comprises a tongue (8) on one of said upper part (5) and said lower part (2) for releasably engaging in a groove (11) on the other of said upper

part (5) and said lower part (2).

5. A bracket according to claim 4, wherein said tongue (8) for engaging in said groove (11) is provided with a rib (9) for releasably resiliently engaging in said groove (11).

6. A bracket according to claim 5 as appended to claim 3, wherein the tongues (7,8) extend from respective edges of the one of the upper part (5) and the lower part (2), these edges being respectively radially inner and radially outer with respect to the middle of the rotary clothes line; wherein the tongues (7,8) curve inwardly with respect to said middle, roughly parallelly to each other, the tongue (7) for engaging in the slot (10) being of substantially constant cross-section, and said rib (9) being inwardly projecting with respect to said middle and being at the free edge of the tongue (8) for engaging in the groove (11); wherein said slot (10) is formed at the radially inner side, with respect to said middle, of the other of said upper part (5) and said lower part (2) and said groove (11) being formed at the radially outer side of the other of the upper part (5) and the lower part (2); wherein the slot 10 is of rectangular cross-section of a size relatively closely to receive the tongue (7) for engaging in the slot (10) and is of a curved form to correspond to the curved shape of the tongue (7), and the groove (11) is of a U-shaped cross-section corresponding to that of the rib (9).

7. A bracket according to any preceding claim, wherein said upper part (5) includes a clamping device (12) comprised of a pair of jaws (13,14) of which at least one is openable and closable to receive an edge zone of said cover and to clamp said edge zone.

8. A bracket according to claim 7, wherein said jaws (13,14) are connected by a hinge (15).

9. A bracket according to claim 7 or 8, wherein one (14) of said jaws (13,14) is provided with a protrusion (17) to assist opening of the jaw (14).

10. A bracket according to claims 7,8, or 9, wherein said jaws (13,14) are provided with screws (16) for locking said jaws (13,14) in a closed position.

11. A bracket according to any one of claims 1 to 6, and provided with a recess (26) to receive an elongate member for mounting said cover, said bracket (1) extending around more than 180° of said recess (26).

12. A bracket according to any preceding claim, wherein said anchoring means (2a,2b) comprises a pair of legs (2a,2b) defining a channel (3) therebetween, and wherein said channel (3), in a section taken in an upwardly extending plane progressing from the mouth of said channel (3), includes a substantially circular portion (3a) for closely receiving a clothes line arm of substantially circular cross-section followed by a substantially rectangular portion (3b) for closely receiving a clothes line arm of substantially rectangular cross-section.

13. A bracket according to claim 11 or 12, and further comprising at least one channelled insert (30;31) of channel cross-section differing from that of said channel (3) for fitting in said channel (3) for accommodating at least one clothes line arm of differing cross-section.

14. A mounting bracket (1) for mounting a clothes line cover on a clothes line arm, characterised in that said bracket (1) includes a clamping device (12) comprised of a pair of jaws (13,14) of which at least one is openable and closable to receive an edge zone of said cover and to clamp said edge zone.

15. A bracket according to claim 14, wherein said jaws (13,14) are connected by a hinge (15).

16. A bracket according to claim 14 or 15, wherein one (14) of said jaws (13,14) is provided with a protrusion (17) to assist opening of the jaw (14).

17. A bracket according to claim 14, 15, or 16, wherein said jaws (13,14) are provided with screws (16) for locking said jaws (13,14) in a closed position.

18. A mounting bracket (1) for mounting a clothes line cover on a clothes line arm, characterised in that said bracket is provided with a recess (26) to receive an elongate member for mounting said cover, and said bracket (1) extends around more than 180° of said recess (26).

19. A combination comprising a mounting bracket (1) for mounting a clothes line cover, a clothes line arm, and a transverse member (25) for locking said bracket (1) to said arm, said bracket (1) being provided with a cut-out (24) below said arm, said cut-out (24) being arranged to receive said member (25) and to allow release of said bracket (1) from said member (25) and thus from said arm, when a predetermined force is applied to said bracket (1), characterised in that said cut-out (24) has one or more of the following features:-

(i) an outwardly diverging mouth;
(ii) a generally curved form extending around an axis of turning of said bracket (1) relative to said arm under said force; and
(iii) embracing more than 180° of said member

(25).

20. A mounting bracket (1) for mounting a clothes line cover on a clothes line arm, said bracket (1) having a channel (3) bounding legs, characterised in that said channel (3), in a section taken in an upwardly extending plane progressing from the mouth of said channel (3), includes a substantially circular portion (3a) for closely receiving a clothes line arm of substantially circular cross-section followed by a substantially rectangular portion (3b) for closely receiving a clothes line arm of substantially rectangular cross-section.

21. A kit comprising a bracket (1) for connecting a clothes line cover to a clothes line arm, and a plurality of channelled inserts (30,31) of channel cross-sections differing from each other for fitting in said bracket (1) for accommodating respective clothes line arms of differing cross-sections.

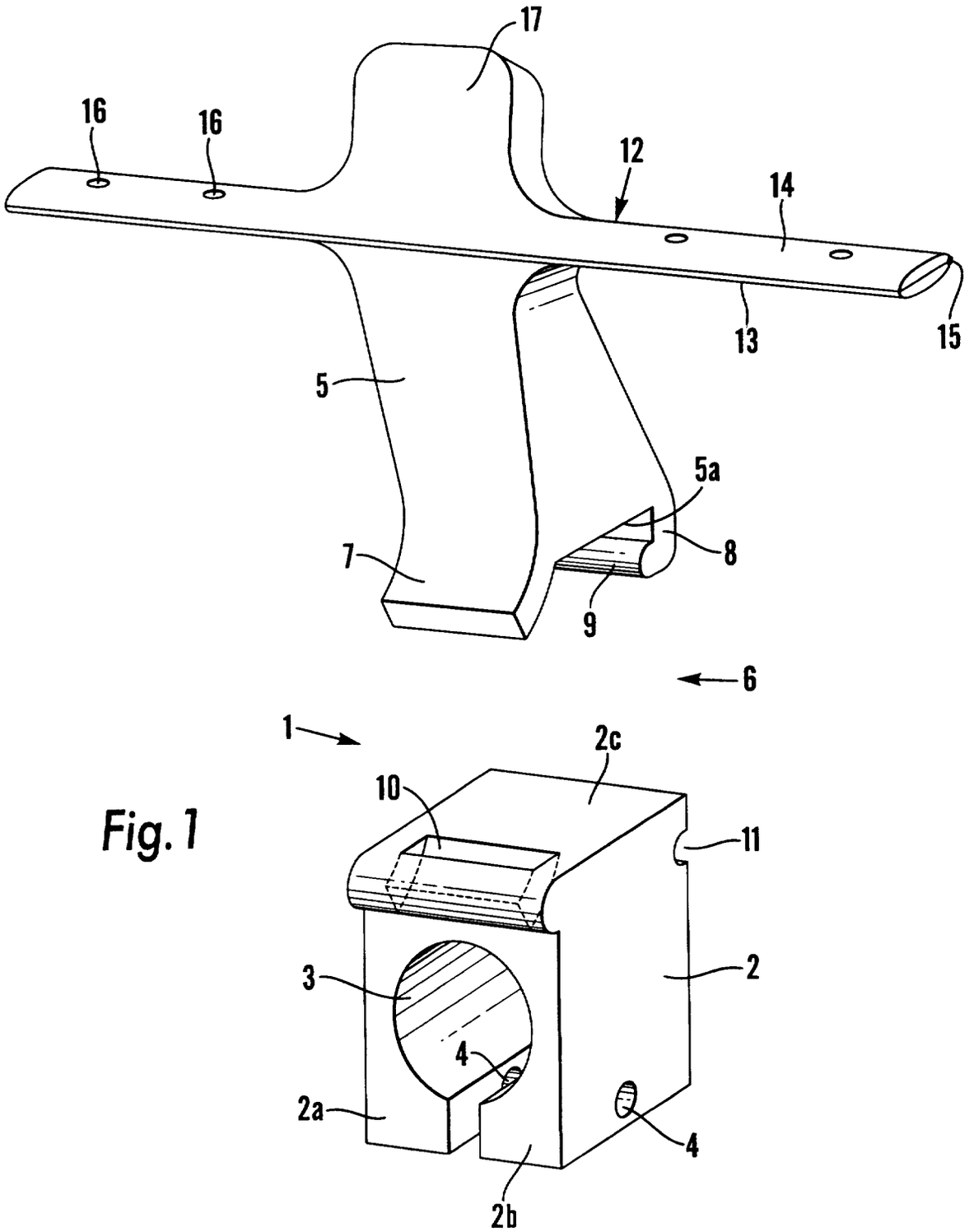

Fig. 1

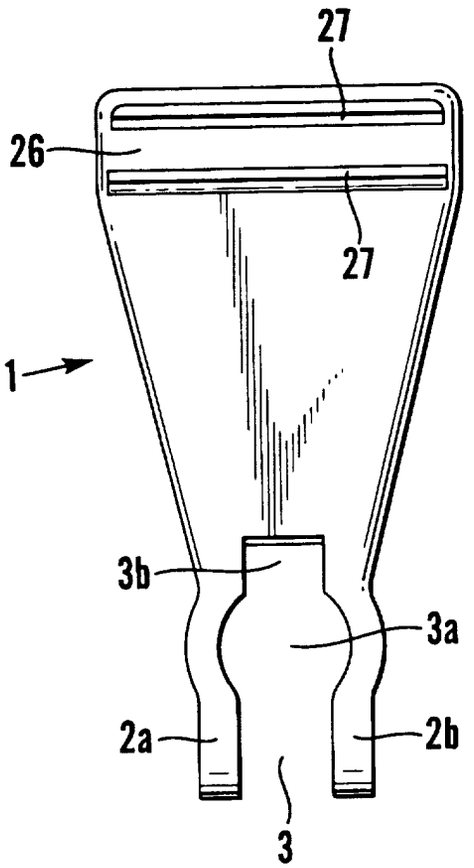

Fig.2

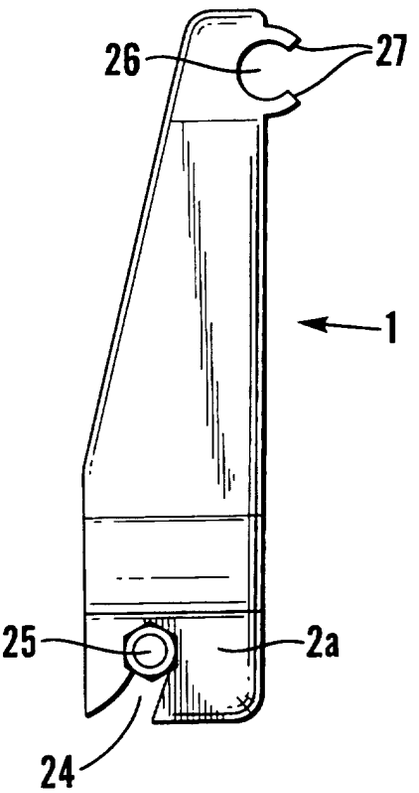

Fig.3

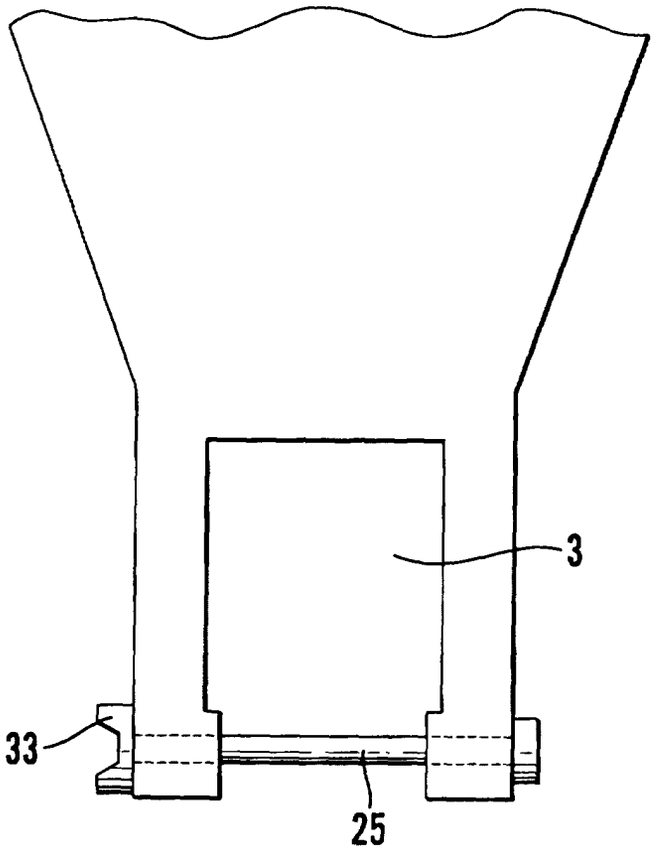

Fig.4

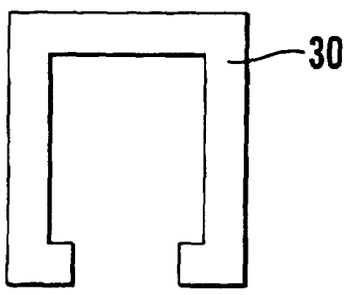

Fig.5

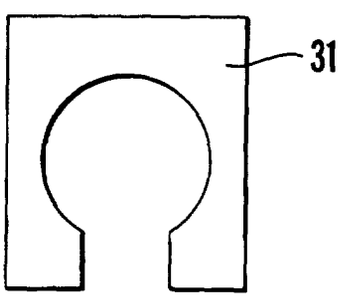

Fig.6