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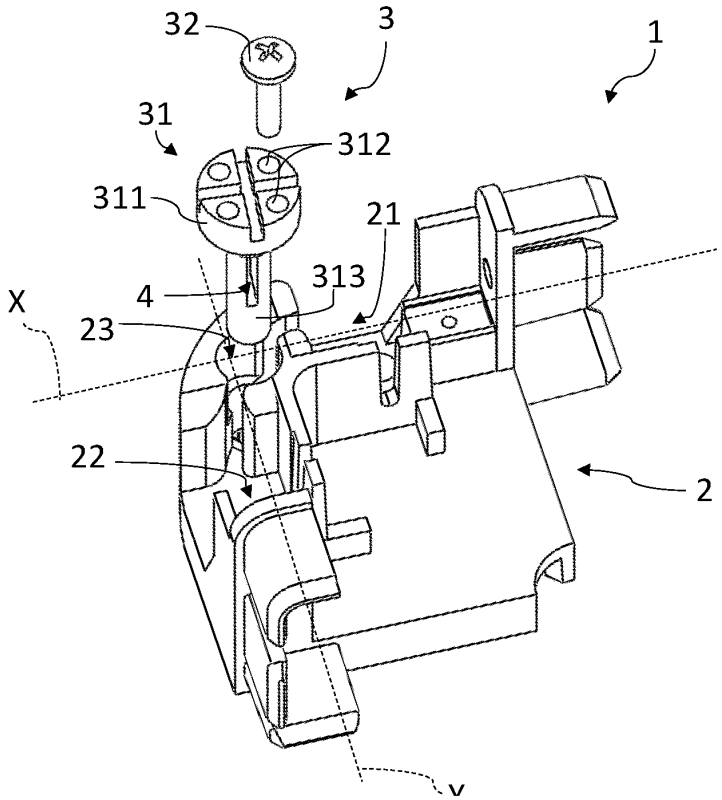
(54) **GUIDE DEVICE FOR CORDS OF A BLIND AND BLIND COMPRISING SAID DEVICE**

(57) Described is a guide device (1) for cords of a blind, comprising a containment body (2) having a first channel (21) and a second channel (22) designed to allow the passage of a cord (C), and means (3) for coupling said cord (C) which is adjustable and manoeuvrable from the outside of said containment body.

FIG.2



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Description

[0001] The present invention relates to a guide device for cords of a blind and a blind comprising said device. In particular, the present invention relates to a guide device for cords of a blind and a blind comprising said device, of the type usable for windows, for example of recreational vehicles.

[0002] The device is of the type that can be connected to relative sliding tracks of a handle 103 of the blind 100 itself.

[0003] It is understood that the invention refers not only to blinds and the term blind means any type of flexible plate-like element sliding parallel to the glazed portion of a window, such as for example a fly screen. The guide device according to the present invention is placed on the perimeter corners of the structural frame of such blinds or fly screens.

[0004] In particular, the present invention relates to the field of windows formed in recreational vehicles, such as caravans or campers.

[0005] In fact, it is known that it is necessary to apply blinds or fly screens on the windows of these recreational vehicles, as during the trips or stopovers the light that filters in from the outside, or the entry of insects inside the vehicle, could be very annoying.

[0006] Known blinds and fly screens generally comprise a handle designed to slide along respective tracks for opening and closing the blind (or fly screen) itself.

[0007] Relative cords are fixed along the tracks to support the blind during its opening and closing movements.

[0008] These cords are fixed to the respective corners of the frames of the blinds, by means of special fixing devices, guide and coupling.

[0009] These known guide devices comprise a containment body, inside which the cord passes, and fixing means for fixing the cord so that it reaches an adequate tension.

[0010] Known guide devices represent a good solution but they are certainly not free of drawbacks.

[0011] A first drawback is that the known guide devices are not always simple and practical to make.

[0012] Another drawback is that the known guide devices do not allow convenient adjustment of the components.

[0013] Another drawback of the known guide devices is that they are generally characterised by a short lifetime, as problems of wear often involve the fact of having to replace some components.

[0014] In fact, it often happens for known guide devices that the relative means of fixing the cord act on it in such a way as to compromise the relative mechanical and physical characteristics, thus implying an obligatory replacement.

[0015] Another drawback of the known guide devices is that they often do not guarantee an adequate level of quality in use.

[0016] It is therefore an aim of the present invention to provide a guide device for cords of a blind that is simple and practical to manufacture.

[0017] A further aim of the present invention is to provide a guide device for cords of a blind that is easily adjustable in case of the need to adjust, for example, the tension of the cords.

[0018] Another aim of the present invention is to provide a guide device for cords of a blind which is capable of guaranteeing a long life and a correct use even in the face of problems related to wear, for example of the tracks on which the handle of the blind (or fly screen) slides.

[0019] According to the invention, these aims and others are achieved by a guide device for cords of a blind having the technical features described in the appended claims. A further aim of the present invention is to provide a blind comprising a guide device that is simple and practical to manufacture.The technical characteristics of the invention, according to the above-mentioned aims, are clearly described in the appended claims and its advantages are evident from the detailed description that follows, with reference to the accompanying drawings which illustrate a purely non-limiting example embodiment thereof, wherein:

- Figure 1 illustrates a schematic side perspective view from above of the guide device for cords of a blind according to the present invention;
- Figure 2 illustrates an exploded perspective view from above of the device of Figure 1;
- Figure 3 illustrates a schematic side perspective view from above of the device of Figure 1, in which a schematic view of the cord is visible;
- Figure 4 shows a schematic view from above of the device of Figure 3;
- Figure 5 illustrates a perspective view of a guide device assembled on a relative frame of a blind and
- Figure 6 illustrates a perspective view of a blind according to the present invention.

[0020] With reference to the accompanying figures, reference numeral 1 denotes a guide device for cords of a blind, hereinafter also simply referred to as the device 1. With particular reference to Figures 5 and 6, the numeral 100 indicates a blind (as mentioned above, meaning a flexible element in general, such as for example also a fly screen) comprising at least one guide device 1.

[0021] The device 1 according to the present invention is of the type connectable to relative sliding tracks 101 of a handle 103 of the blind and crosspieces 102.

[0022] In particular, the device 1 is located at each of the corners of the corners of the frame of a blind 100.

[0023] In detail, the device 1 is connected in an intermediate position between a respective sliding track 101 and a respective crosspiece 102 of the frame of the blind 100. This device 1 in detail makes it possible to maintain the support cords of the blind 100 at an adequate tension.

[0024] The term blind 100 means any flexible plate-like element applicable to a window (in particular of recreational vehicles such as campers or caravans) that is able to protect the indoor environment from outside light or insects (in the case of fly screens).

[0025] This invention refers to a blind, but this does not prevent the object of this invention from referring, for example, to a fly screen.

[0026] The device 1 according to the present invention comprises a containment body 2.

[0027] The containment body 2 is advantageously of the type comprising two semi-portions connectable by interlocking (only one of the two semi-portions is illustrated in the accompanying drawings so as to allow the display of the internal components).

[0028] The containment body 2 comprises at its relative ends first 5 and second 6 connection means respectively designed to connect the device 1 itself to a respective track 101 and a respective crosspiece 101.

[0029] The first 5 connecting means are positioned on the containment body 2 at the distal end with respect to the one where the second 6 connecting means are positioned. The first 5 and second 6 connections are therefore positioned mutually perpendicular to a plane P on which the containment body 2 lies.

[0030] The containment body 2 has a first channel 21 extending along a horizontal direction X and a second channel 22 extending along a direction Y transverse to the direction X.

[0031] The horizontal direction X and the transversal direction Y are perpendicular to each other with respect to a plane P on which the containment body 2 lies; that is to say, of the blind 100.

[0032] If the blind 100 is installed on the vehicle in such a way that the sliding of the flexible element takes place in the vertical direction, the horizontal direction X is the same as the direction of extension of the crosspieces 102 of the blind 100 while the direction Y is the same as the direction of extension of the sliding tracks 101.

[0033] The above-mentioned first and second channels 21 and 22 are designed to allow the passage of a cord C.

[0034] The cord C is advantageously a single one for a single blind 100 and passes through the four guide devices 1 and the respective tracks 101 and crosspieces 102 of the blind 100.

[0035] On the other hand, a further embodiment provides for the use of two single cords C, one designed to operate on the left portion of the blind 100 and the other designed to operate on the right portion of the blind 100.

[0036] In this solution, the possibility of independent adjustment of each individual guide device 1 is fundamental as it is possible to adjust the tension of two individual cords to obtain an optimal sliding (for example without jamming) of the flexible element of the blind 100.

[0037] With particular reference to the Figure 3, the device 1 comprises means 3 for coupling the cord C.

[0038] The coupling means 3 allow the cord C to be stabilised and to give it an adequate tension so that it can guarantee an optimal support during the opening and closing of the flexible element of the blind 100.

[0039] The coupling means 3 are adjustable and manoeuvrable from the outside of the containment body 2.

[0040] In particular, the coupling means 3 are adjustable even when the blind 100 is installed on a window and ready for use.

[0041] This feature allows the tension of the cord C to be adjusted, for example, even without the need to disassemble the device 1 or to uninstall the blind 100 from the window.

[0042] In detail, as shown in Figures 5 and 6, the coupling means 3 are arranged facing the front face F of the blind 100, that is to say, the face positioned towards the inside of the fitted vehicle (or in any case of the internal environment). The device 1 according to the present invention comprises a seat 23, interposed between the above-mentioned first 21 and second 22 channels and positioned at the coupling means 3.

[0043] The device 1 according to the present invention comprises a plug 31 configured to be inserted and rotated inside the seat 23 so as to allow the winding of the cord C around it (visible in Figure 3).

[0044] With reference to the accompanying drawings, the plug 31 comprises a head 311 configured to emerge from the seat 23.

[0045] Advantageously, with reference to the embodiment illustrated in the accompanying drawings, the plug 31 comprises four holes 312 formed on the head 311. Advantageously also, the plug 31 comprises a substantially cylindrical portion 313 designed to be inserted into the seat 23.

[0046] In particular, this portion 313 allows the winding of the cord C around it, so as to regulate the tension thereof.

[0047] The portion 313 has a smaller diameter than that of the seat 23.

[0048] Advantageously, the coupling means 3 comprise a screw 32 designed to be inserted in one of the holes 312 so as to be positioned between an inner wall of the seat 23 and the portion 313.

[0049] This arrangement of the screw 32 makes it possible to fix and stabilise at least one section of the cord C.

[0050] This allows the maintenance of an adequate tension of the cord C to be ensured.

[0051] In addition, the coupling means 3 allow a simple adjustment of the tension of the cord C.

[0052] In fact, in order to adjust the tension of the cord C it is sufficient to extract the screw 32 and rotate the plug 31 in order to re-register the correct tension of the cord C.

[0053] This operation is of fundamental importance since the adequate tension of the cord C can vary during the life of the device 1 depending on various factors such as, for example, the risk of slackening of the cord C itself, or the expansion of the tracks 101 or crosspieces 102 of the frame of the blind 100.

[0054] For this reason, the coupling means 3 ensure that the cord C is not subjected to stresses harmful for the cord C itself, and it is also possible to adjust its tension very simply and quickly.

[0055] Advantageously, the screw 32 is designed to emerge externally with respect to the containment body 2.

[0056] This makes it possible to further optimise the practicality of any maintenance operation.

[0057] Advantageously, with reference to the Figure 1, the portion 313 has a passageway of the cord C.

[0058] This passageway 4 allows a practical insertion of the cord C in the plug 31, and then facilitates the winding thereof around the portion 313.

[0059] Advantageously also, the device 1 according to the present invention comprises a cap for protection of the containment body 2.

[0060] The guide device 1 for cords of a blind 100 and the blind 100 according to the present invention allow the drawbacks of the prior the art to be overcome and to achieve important advantages.

[0061] A first advantage of the device 1 and the blind 100 according to the present invention is given by the fact that it provides a product of simple and practical manufacture and assembly.

[0062] Another advantage of the present invention is that it provides a product which is capable of safeguarding over time the condition of a cord for blinds.

[0063] In fact, the above-mentioned coupling means 3 allow the cord C to be fixed and stabilised without compromising its mechanical and physical characteristics, keeping it functional for long periods of time.

[0064] Another advantage of the device according to the present invention is given by the fact that it provides a product that is simple to maintain, and that is easy to adjust, without the need for disassembly of components, if necessary.

[0065] Moreover, the ease of adjustment is such even when the device is installed on the frame of the blind, and when the blind itself is installed on the window.

Claims

1. A guide device (1) for cords of a blind (100), connectable to respective sliding tracks (101) of one (103) and relative crosspiece (102) of said blind (100) and comprising:

   - a containment body (2) having a first channel (21) extending along a horizontal direction (X) and a second channel (22) extending along a transversal direction (Y), said first and second channels (21, 22) being designed to allow the passage of a cord (C); said horizontal direction (X) and said transversal direction (Y) being perpendicular to each other with respect to a plane (P) on which said containment body (2) lies;
   - means (3) for coupling said cord (C), said coupling means being adjustable and manoeuvrable from the outside of said containment body (2), said coupling means (3) further comprising a screw (32) designed to secure in a fixed position at least one section of said cord (C).

2. The device (1) according to claim 1, **characterised in that** said containment body has a seat (23) interposed between said first and second channels (21, 22).

3. The device (1) according to the preceding claim, **characterised in that** said coupling means (3) comprise a plug (31) configured to be inserted and rotate inside said seat (23) in such a way as to allow the winding of said cord (C) about it.

4. The device (1) according to the preceding claim, **characterised in that** said plug (31) comprises:

   - a head (311) configured to emerge from said seat (23);
   - a plurality of holes (312) made on said head (311);
   - a substantially cylindrical portion (313) designed to be inserted in said seat (23).

5. The device (1) according to the preceding claim, **characterised in that** said portion (313) has a diameter less than that of said seat (23), **and in that** said screw (32) is designed to be inserted in one of said holes (23) in such a way as to be positioned between an inner wall of said seat (313) and said portion (313) and fix at least one stretch of said cord (C).

6. The device (1) according to claim 4, **characterised in that** said portion (313) has a passageway (4) for the passage of said cord (C).

7. The device (1) according to any one of the preceding claims, **characterised in that** it comprises a protective cap for said containment body (2).

8. The device (1) according to claim 1, wherein said coupling means (3) are positioned on said containment body (2) facing a front face (F) of said blind (100).

9. The guide device (1) according to any one of the preceding claims, wherein said containment body (2) comprises at its relative ends first (5) and second (6) connection means respectively designed to connect said device (1) itself to a respective track (101) and a respective crosspiece (102) of said blind (100).

10. The guide device (1) according to the preceding claim, wherein said first (5) and said second (6)

connecting means are made in the form of protrusions of said containment body (2).

11. The device (1) according to claim 9, wherein said first (5) and said second (6) connecting means are mutually perpendicular with respect to said plane (P) on which said containment body (2) lies.

12. A blind (100) comprising a frame (200), said frame (220) comprising:

- at least one guide device (1) according to any one of the preceding claims,
- two sliding tracks (101) for a handle (103) of a flexible element,
- two connecting crosspieces (102), said blind (100) being **characterised in that** said at least one guide device (1) is positioned between one of said sliding tracks (101) and a crosspiece (102).

13. The blind (100) according to the preceding claim, wherein said at least one device (1) is removably fixed to said respective tracks (101) and crosspieces (102).

FIG.1

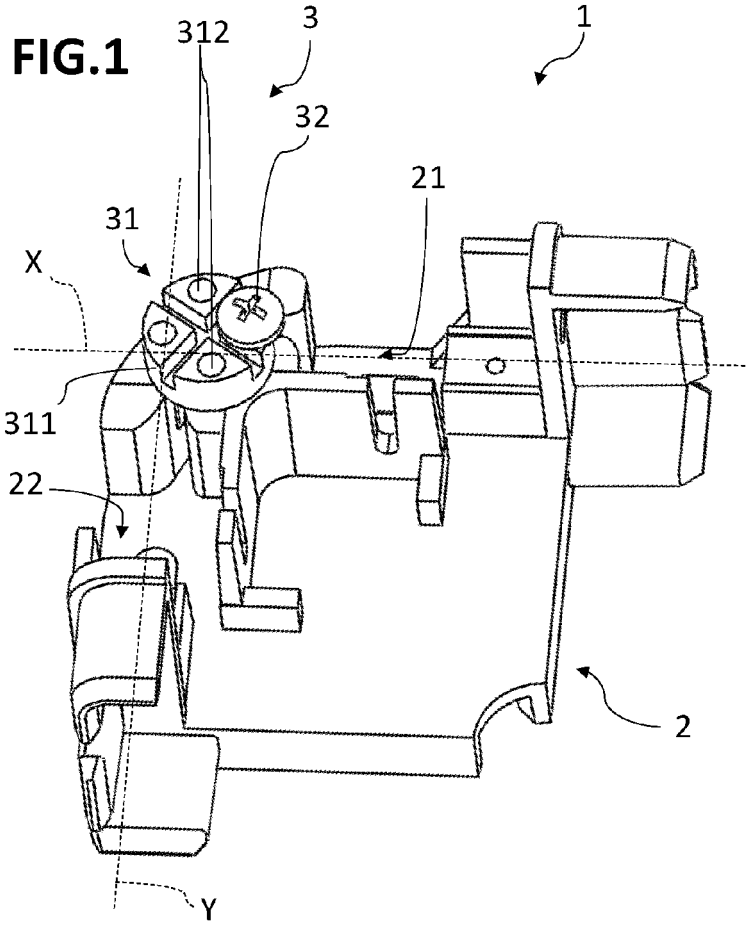


FIG.2

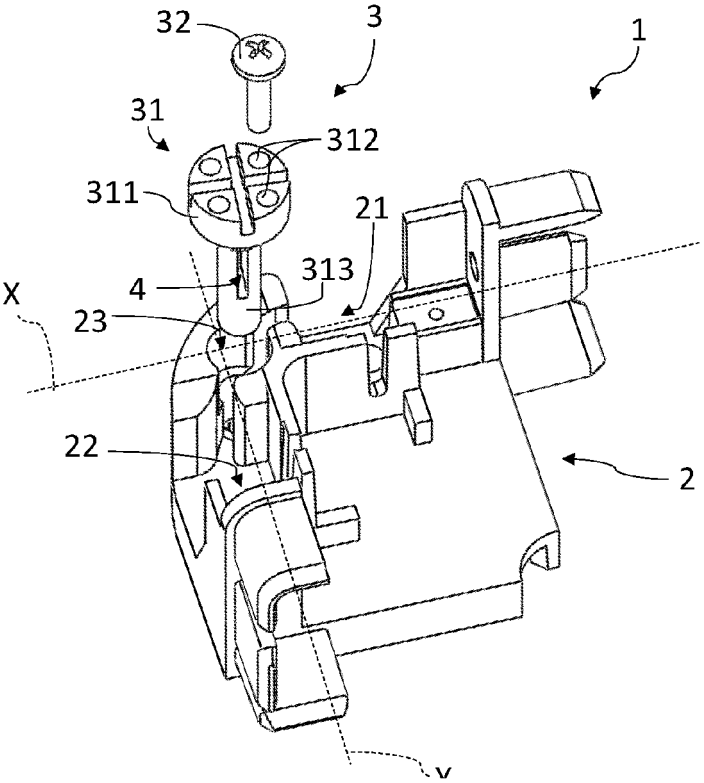


FIG.3

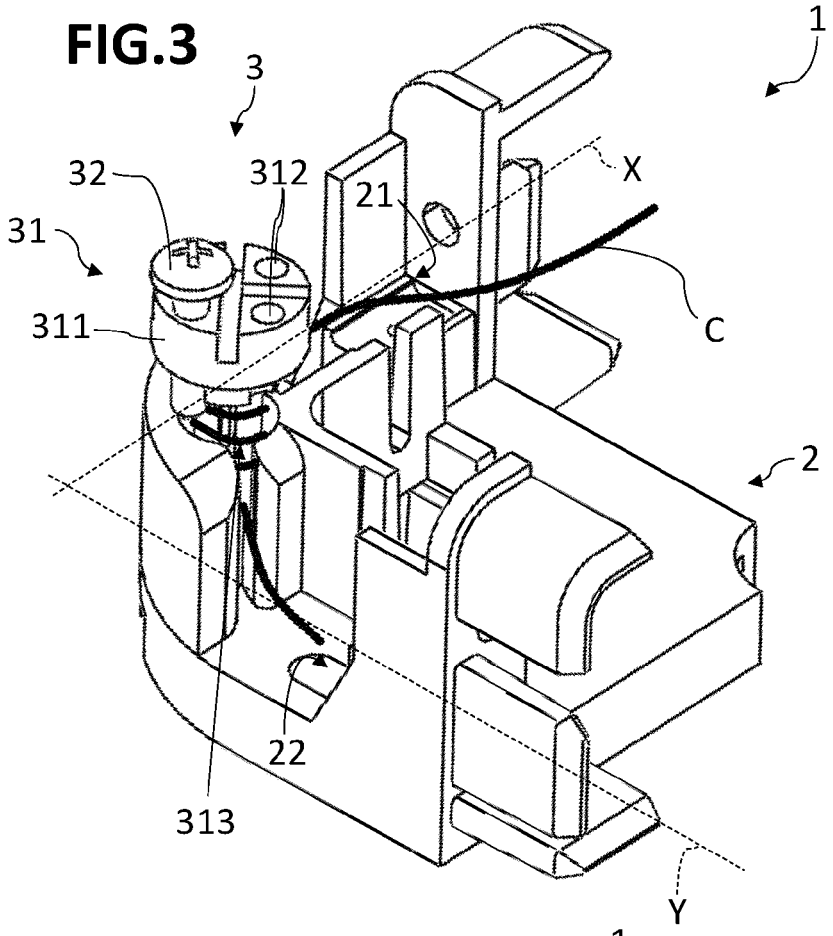


FIG.4

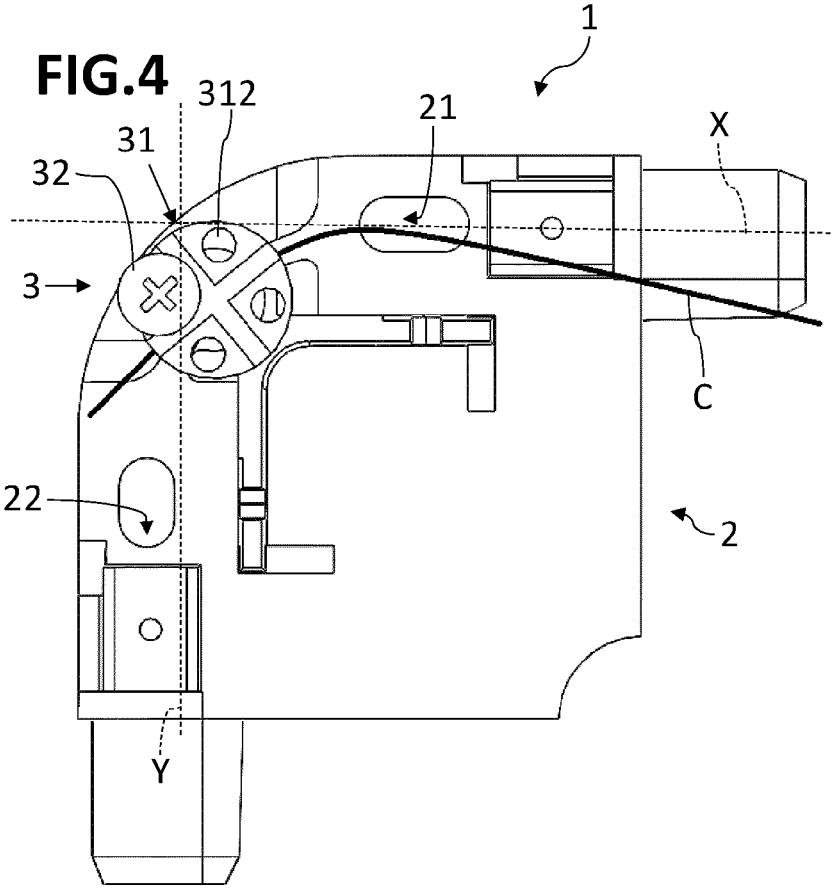


FIG.5

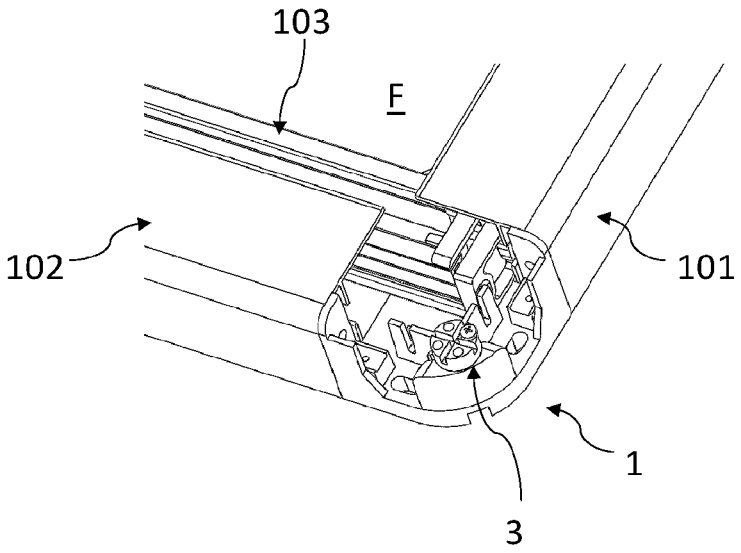
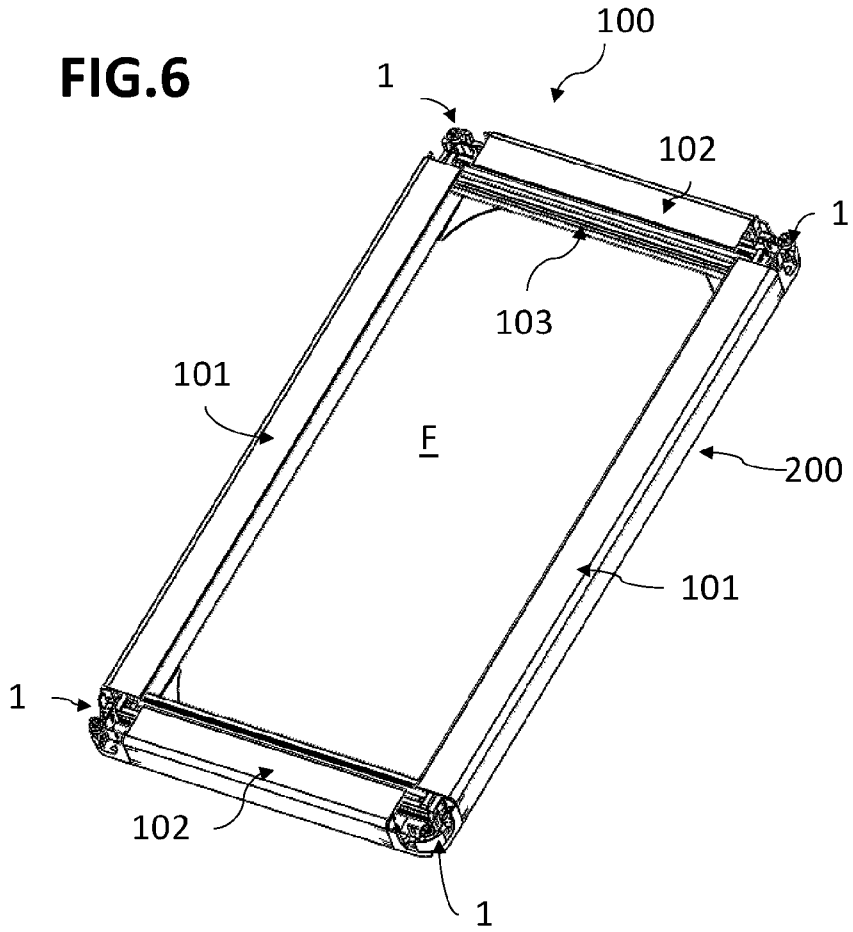


FIG.6



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EUROPEAN SEARCH REPORT

Application Number
EP 24 21 5234

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	CN 111 720 033 B (YU XIAOLAN) 1 February 2022 (2022-02-01) * the whole document *	1-13	INV. E06B9/322 E06B9/324 E06B9/54
A	US 2012/312486 A1 (SPRAY JEFFREY L [US]) 13 December 2012 (2012-12-13) * paragraphs [0037] - [0039]; figures 1,3-8 *	1-13	E06B9/78
A	JP 2015 105556 A (NICHIBEI KK) 8 June 2015 (2015-06-08) * figures 1,5,6 *	1-13	

TECHNICAL FIELDS SEARCHED (IPC)

E06B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	4 April 2025	Bourgoin, J

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