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(54) **HOUSING-ANCHORING SYSTEM WHICH CAN BE ATTACHED IN WINDOW GUIDES**

(57) The present invention consists of an anchoring for small box abutable against window rails which is applicable to small boxes for blind tape collectors, small boxes for blind cable reels, and the like. This anchoring consists of a special configuration of the fastening ele-

ments of the small box which allows such a fastening to be established on the window rail either on the outside or on the inside by means of using some breakable pivots for the easy elimination thereof when the support plate of the small box is abutting externally.

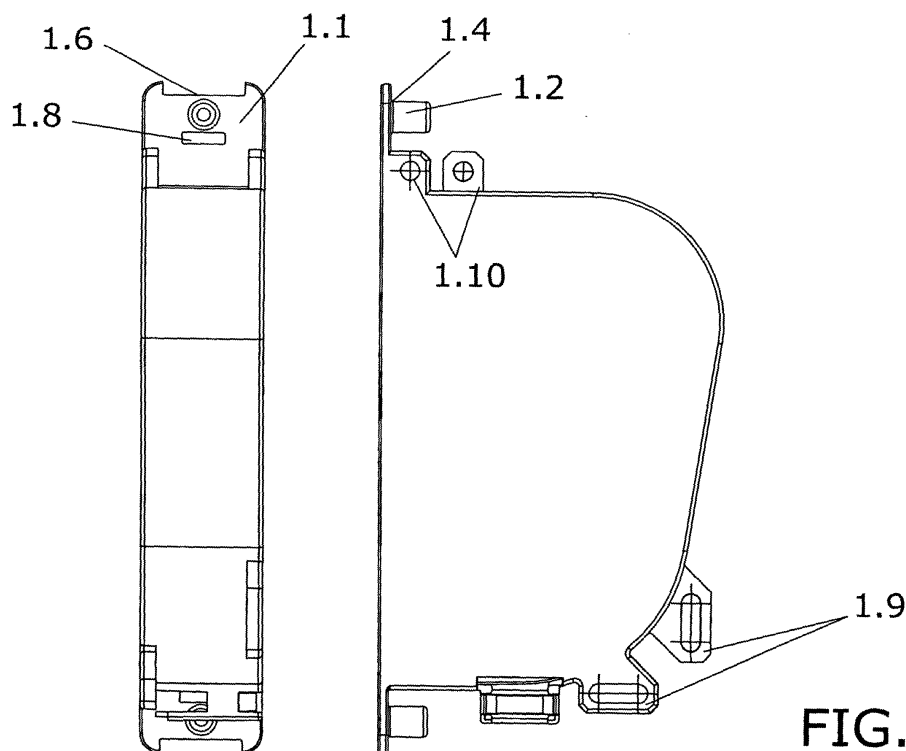


FIG. 1

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Description

OBJECT OF THE INVENTION

[0001] The present invention consists of an anchoring for small box abutable against window rails which is applicable to small collector boxes for blind tape, small boxes of blind cable reels, and similar.

[0002] This anchoring consists of a special configuration of the fastening elements of the small box which allows such a fastening to be established on the window rail either on the outside or inside.

[0003] The invention is characterized in the use of some pivots breakable for their easy elimination when the support plate of the small box is abutted externally.

[0004] Likewise, in the flanges of the anchoring there is an end recess plus a perforation both intended to facilitate the lodging of some spacing ribs present on the base of the body intended to be housed in the small box. This recess together with the perforation establish the same distance between the window rail and the body intended to be housed in the small box independently of where the small box is positioned.

BACKGROUND OF THE INVENTION

[0005] Small collector boxes for blind tapes are well-known which abut on one side of the window to house the winding.

[0006] Among these small boxes, mention can be made of that described in the Spanish Patent with publication number ES2151371 consisting of a small box specially conceived to optimise the space of the winding at the same time as avoiding being damaged by the window when this is opened.

[0007] The optimisation of the space is achieved by projecting the central area outwards without overshooting the extra distance allowed by the hinges of the window.

[0008] This objective is achieved by establishing a special configuration of the coupling of the small box to the framework by means of some perforated pivots wherein the fastening screws enter.

[0009] In this configuration the small box is screwed behind the framework whereby the screws tap into the pivots of the framework to establish the coupling by means of their thread.

[0010] The present invention allows the front and rear coupling of the small box with respect to the window rail without making use of two different configurations, the application of this configuration of the anchoring not being limited to small collector boxes of blind tapes, it is also applicable to small boxes for cable reels and similar.

DESCRIPTION OF THE INVENTION

[0011] The present invention consists of an anchoring for small box abutable against window rails. This anchor-

ing allows the installation of the small box both on the outside of the window rail and on the inside. The window rail is no more than a lateral profile which is part of the window frame. These window frames can come pre-fitted with the small boxes intended to receive the blind tape collectors or the reels for raising the blind. With these small pre-fitted boxes the unit is taken directly to the work-site for mounting.

[0012] In the state of the art mention was made of the use of pivots which emerge from the base of the small box so that the coupling screw taps inside this pivot.

[0013] The diameter of the pivot has to be sufficient so that the strength of the pivot is capable of absorbing the torsion and traction or compression forces which it supports in the penetration and tightening of the screw.

[0014] In the tightening operation, the screw applies through the penetration of the screw threads into the internal wall of the pivot a force which is mainly torsion.

[0015] The tightening action of the screwdriver and subsequently the axial force of the screw impart a tensile and compressive stress respectively which have to be considered added to that of torsion as the minimum requirements for strength.

[0016] In this invention some anchoring means are considered which allow the coupling surface of the small box to the window rail to be on the outside or inside. Covering the space for the small box there is a decorative cover which in turn leaves a space which is usually occupied by the casing of the body to be installed inside the small box, for example a blind raising reel, or by the blind tape collector.

[0017] The present invention considers a configuration of the anchoring which allows the small box to abut on the outside or inside without changing the design of the fastenings of the rest of the elements.

[0018] This possibility is due to the presence of some breakable pivots on the rear wall of the flanges which prolong the front plane surface of the small box.

[0019] These breakable pivots are perforated, with holes which pass through or not, and their mission is that of receiving the fastening screw of the whole unit. Since the screw enters the perforation of the pivot by tapping, the pivot has sufficient strength to withstand the forces mentioned previously.

[0020] However, these pivots have a weakened part which makes them breakable to allow their easy elimination permitting their abutal on the external face of the window rail.

[0021] When the pivots have been eliminated by breaking them at the weakened part, on the vane on which the pivot was mounted a perforation appears of greater diameter which allows the passage of the screw so that in this box the screw taps directly into the window rail.

[0022] In turn, the casing of the body to be installed in the small box, for example a blind tape collector, has some support ribs on its fastening vanes. On supporting these vanes by means of the ribs, a gap is established

to the surface of the rail. In the gap left by this spacing is where the anchoring vane of the small box is housed. This spacing is independent of whether the small box is supported on the outside or inside.

[0023] For this reason the anchoring vanes of the small box have some recesses and perforations which allow the passage of the spacing ribs of the body to be installed in the small box. Thus, in the installation of the small box on the outside of the window rail, the vanes of the small box are always housed inside the gap left by the ribs of the body to be installed in such a way that the small box does not impose a separation different to that already established.

[0024] In the breakable pivots, in the event of reinforcement being necessary in the weakened part to withstand higher torsion forces, the optional incorporation of reinforcing ribs is foreseen.

[0025] When these ribs are two in number and arranged in opposition, they allow the flexion of the pivot about the points where the reinforcing ribs are situated. This flexion is what allows easy breakage of the pivot for its elimination.

[0026] The breakable pivots have a first weakened part on the step which is established between the two different diameters which are present in the interior perforation. This step coincides with the rear plane of the vane of the small box so that there is a larger diameter in the vane whereby the screw never taps into it. The coincidence between the rear plane and the step due to the difference of diameters defines a reduction in the cross-section and therefore defines this first weakened part.

[0027] Optionally it is possible to increase the weakened part by incorporating for example a peripheral groove in the base of the breakable pivot.

[0028] The inclusion of additional fastening lugs is also an object of this invention, arranged as a prolongation of the lateral greater walls. In this case, fastenings are arranged on one side and the other, not coincident, to allow the screwdriver to pass without the lug of the opposing side interfering. Some or all these lugs can be slotted to facilitate the tapped coupling in a preset point.

DESCRIPTION OF THE DRAWINGS

[0029] The present descriptive specification is supplemented with a set of drawings which illustrate the preferred embodiment of the invention without restriction therein.

[0030] Figure 1 shows a plan view and an elevation of the small box with the anchoring vanes and the breakable pivots.

[0031] Figure 2 shows a detail of the section of the breakable pivot taken on the plane indicated in the previous figure as A-A'.

[0032] Figure 3 shows the same detail including two reinforcing ribs, one on each side of the breakable pivot.

[0033] Figure 4 shows an exploded perspective of an example of the invention wherein the window rail is in-

cluded, a tape collection reel and the decorative cover. The arrangement in which the small box is shown is abutting on the window rail on the interior.

[0034] Figure 5 shows an exploded perspective of an example of the invention wherein the same elements are included as in the previous figure only that in this case the small box is abutting on the window rail on the exterior. The small box is represented with the breakable pivots removed.

[0035] Figure 6 is a detail of the section of the screwed coupling with the small box abutting on the interior.

[0036] Figure 7 is a detail of the section of the tapped coupling with the small box abutting on the exterior.

EXAMPLES OF EMBODIMENT OF THE INVENTION

[0037] The present invention consists of an anchoring for small box abutable on window rails which allows the installation of the small box on the inside and on the outside of the front face of the aforesaid rail.

[0038] In figure 1 a small box (1) embodiment is shown which incorporates the anchoring object of this invention. This anchoring consists of some vanes (1.1) which prolong the front plane face on which vanes there are some breakable pivots (1.2) mounted on their rear face.

[0039] Figure 2 shows the sectional view of a breakable pivot (1.2). The breakable pivots (1.2) have a perforation (1.3), passing through or not, of diameter such that the penetration of the screw (5) is tapped.

[0040] On the external face of the breakable pivot (1.2), at the root, there is a weakening notch (1.4) by way of a peripheral groove which in this embodiment has been implemented according to an angled section the lower side of which prolongs the horizontal surface.

[0041] This weakened notch (1.4) is that which allows easy breakage of the pivot (1.2) for the elimination thereof.

[0042] On the inside of the perforation (1.3) of the pivot (1.2), there is a step (1.5) since the diameter of the perforation on the front side is greater.

[0043] In this embodiment, the step (1.5) is located coincident with the surface from which the breakable pivot (1.2) emerges in such a way that the weakened part is produced precisely on a horizontal surface so that the breakage eliminates the pivot (1.2) without leaving any projection; and also, the hole remaining is of greater diameter so that the screw (5) in this case does not tap into it but into the perforation (3.1) of the rail (3). Thus, in this embodiment the step (1.5) is the transition between two diameters.

[0044] When the torsion couple during the screwing action is high, reinforcement is envisaged of the notch (1.4) or weakened part by means of one or more ribs (1.7). If use is made of two ribs (1.7), as is the case of the example shown in figure 3, it is convenient to arrange these (1.7) in opposition so that a hinged line is defined along which, by flexion, the breakable pivot (1.2) snaps more easily.

[0045] The vane (1.1) in which the small box (1) is prolonged, in addition to recesses (1.6) has perforations (1.8) or both (1.6, 1.8) coincident with the position of some ribs or projections (2.2) in the vanes (2.1) of the body (2) to be installed inside the small box (1). These recesses (1.6) can have different configurations in which mention is made of their peripheral arrangement on the vane (1.1), or on some rims thereof (1.1) giving rise to a reduction in their dimensions.

[0046] The term coincident is used in the sense that such ribs (2.2) or projections, when the small box is fixed to the rail (3) of the window on the outside after eliminating the breakable pivots (1.2), due to the presence of the recesses (1.6) and the perforations (1.8), such ribs (2.2) do not rest on the small box (1) but on the external surface of the rail (3) of the window. Thus, in this configuration it is also possible to interpret that the projections (2.2) establish a separating gap which can be occupied by the front part of the small box (1) where its vanes (1.1) are.

[0047] If the installation of the small box (1) is on the inside of the rail (3) then the ribs (2.2) or projections continue to be for support, the body (2) which is installed on the inside the small box (1) is likewise separated and of course the external decorative cover (4) also remains in the same position with respect to the rail (3) of the window.

[0048] Figures 4 and 5 represent an exploded view of the unit in which the relative position can be seen between the rail (3) of the window, the small box

(1) (inside of or outside according to the case), the body (2) installable in the small box (1), plus the decorative cover (4) with the fastening screws (5) of the unit.

[0049] In particular, the details of the coupling are shown in figures 6 and 7 where:

- In figure 6 a detail is represented of the first case, that corresponding to the small box (1) installed on the inside, in which the screw (5) crosses through the perforation (3.1) of the rail (3) of the window without tapping, and reaches the breakable pivot (1.2) which has not been eliminated. It is in the breakable pivot (1.2) where the screw (5) taps compressing the unit, from the decorative cover (4) to the small box (1), the whole being joined to the rail (3) of the window.
- In figure 7 a detail is represented of the second case, that corresponding to the small box (1) installed on the outside, in which the breakable pivot (1.2) has been eliminated to allow installation on the external face of the rail (3). The elimination of the breakable pivot (1.2) gives rise to a perforation having a diameter greater than the screw (5) so that the latter (5) passes without tapping and it is in the perforation (3.1) of the rail (3) where it taps. With this arrange-

ment, the small box (1) is trapped between the body (2) that is introduced therein (1) and the rail (3).

[0050] The anchoring of the invention is completed with the use of some lugs (1.9, 1.10) which allow screwing on to the side face of the rail.

[0051] The side face can be the right or the left, depending on where the small box (1) is installed. The lugs (1.9, 1.10) are arranged in pairs and out of step with each other so that one lug does not interfere with the other when using the screwdriver. Also these lugs (1.9, 1.10) can be slotted to facilitate the correct positioning. In the embodiments shown in the figures, different configurations have been combined by way of example: with and without slots; and of the slotted ones, the direction of the slots perpendicular to each other.

[0052] The essential nature of this invention is not altered by variations in materials, form, size and arrangement of the component elements, described in a non-restrictive manner, this being sufficient for an expert to proceed to the reproduction thereof.

Claims

1. - Anchoring for small box abutable against window rail, of among the means of anchoring of small boxes intended to receive blind collectors, reels and the like **characterized in that** a coupling is established on the internal or external face of the rail (3) of the window by means of the presence of:

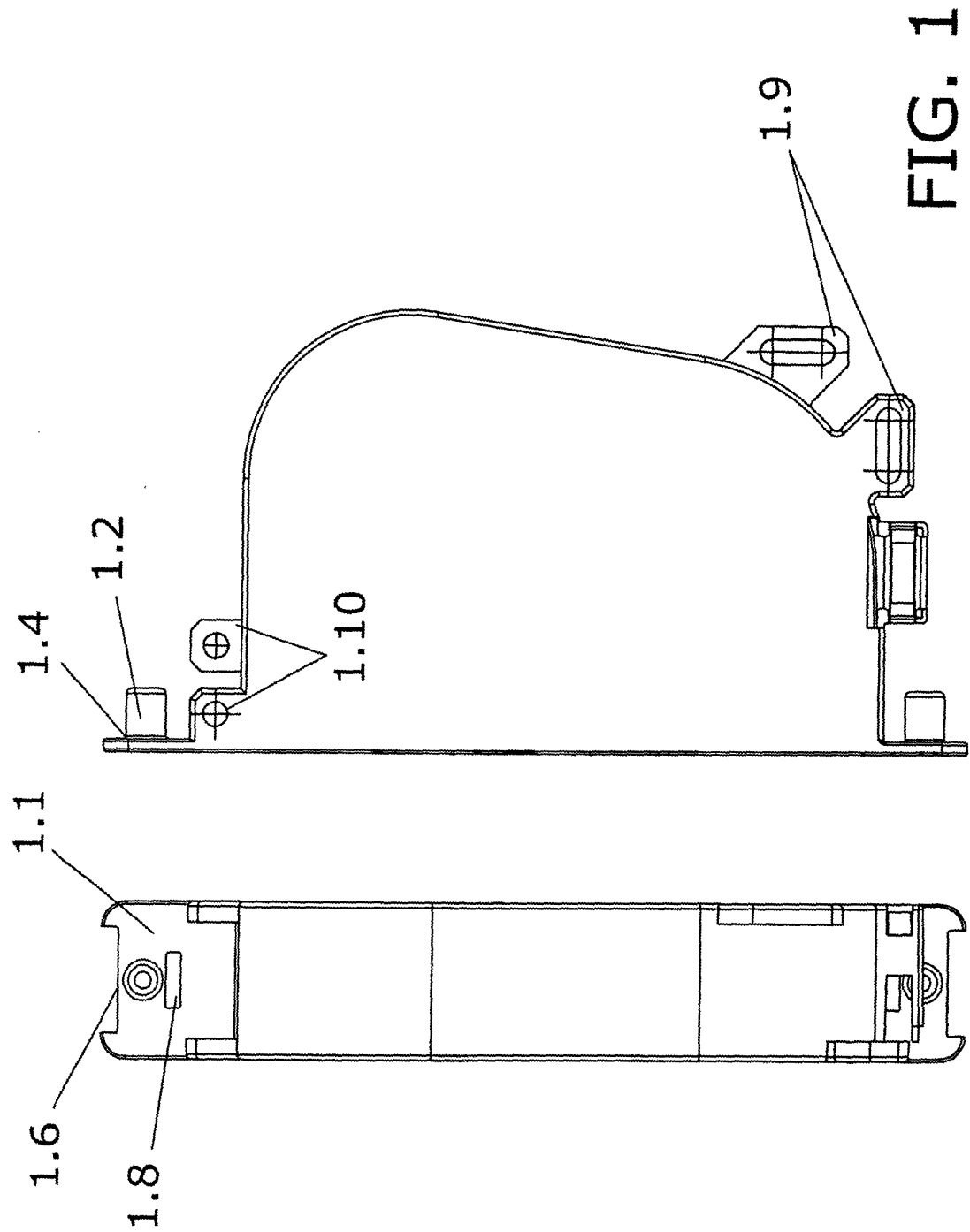
- some pivots (1.2) breakable by means of a weakened part in their base and in which in the installation on the inside face of the rail (3) of the window the screw (5) taps into an internal perforation (1.3), passing through or not, of the pivot (1.2); or, in the installation on the outside face of the rail (3) of the window, with the elimination of the breakable pivot (1.2) the vane (1.1) on which the pivot (1.2) stood, has a perforation of diameter greater than the screw (5) so that the tapping takes place in the rail (3) of the window,
- some recesses (1.6) and/or perforations (1.8) coincident in position with supporting and spacing ribs (2.2) present on the vane (2.1) of the body to be installed in the small box (1) so that they find their support directly on the rail (3) of the window.

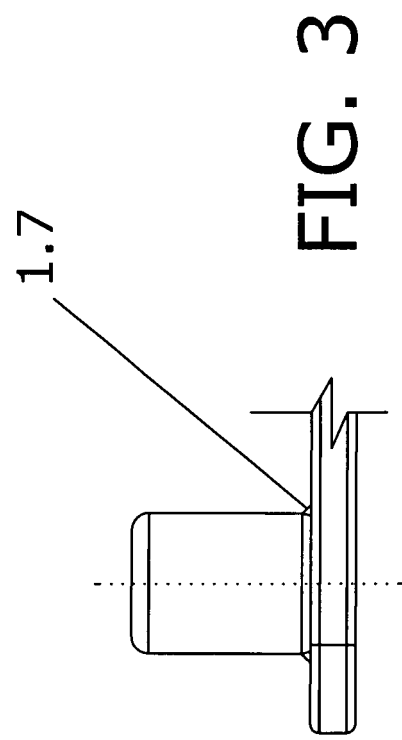
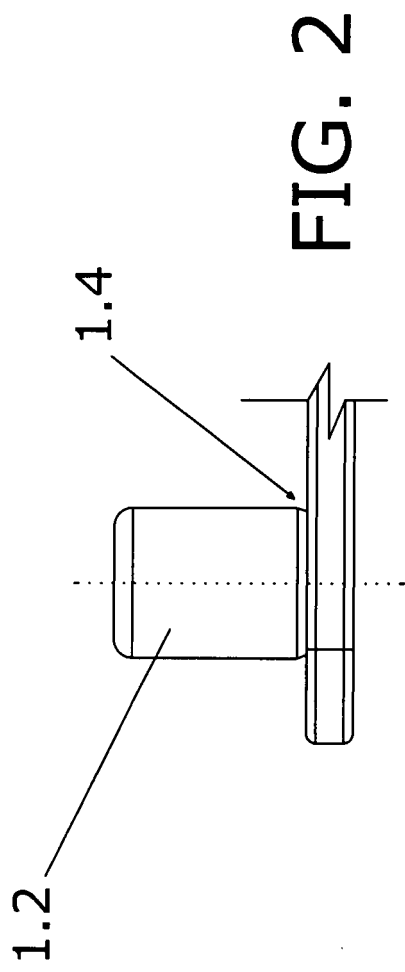
2. - Anchoring for small box abutable against window rail according to claim 1 **characterized in that** the weakened part (1.4) of the base of the breakable pivot consists of a peripheral groove.
3. - Anchoring for small box abutable against window rail according to claim 2 **characterized in that** the

peripheral weakened groove (1.4) has a section according to two straight segments at an acute angle wherein the lower straight segment is a prolongation of the base on which the breakable pivot stands.

4. - Anchoring for small box abutable against window rail according to claim 2 **characterized in that** the weakened part of the base of the breakable pivot (1.2) is completed with the presence of a step (1.5) of transition between the greater diameter of the perforation and the diameter for the internal tapping of the breakable pivot (1.2). 5
10
5. - Anchoring for small box abutable against window rail according to claim 2 **characterized in that** the weakened part of the base of the breakable pivot (1.2) is reinforced by means of one or more reinforcing ribs (1.7). 15
6. - Anchoring for small box abutable against window rail according to claim 5 **characterized in that** the reinforcing ribs (1.7) are two in number and arranged in opposition. 20
7. - Anchoring for small box abutable against window rail according to claim 1 **characterized in that** the weakened part of the base of the pivot (1.2) is established only by the presence of a step (1.5) of transition between the greater diameter of the perforation and the diameter for the internal tapping of the breakable pivot (1.2). 25
30
8. - Anchoring for small box abutable against window rail according to claim 1 **characterized in that** the recess (1.6) which allows the support of one of the ribs (2.1) of the body (2) installable in the small box (1) is outermost and the perforation (1.8) which allows the passage of another rib (2.1) for support is at the other side of the breakable pivot (1.2). 35
40
9. - Anchoring for small box abutable against window rail according to claim 1 **characterized in that** the recess (1.6) which allows the support of one of the ribs (2.1) of the body (2) installable in the small box (1) covers some of or all the rims of the vane (1.1) of the small box (1), resulting in the vane (1.1) being of smaller dimensions. 45
10. - Anchoring for small box abutable against window rail according to claim 1 **characterized in that** it has a lateral additional coupling consisting of the presence of lugs arranged in pairs and out of step with each other. 50
11. - Anchoring for small box abutable against window rail according to claim 10 **characterized in that** one or the two out-of-step lugs (1.7) are slotted. 55

12. - Anchoring for small box abutable against window rail according to claim 11 **characterized in that** the slots of the lugs (1.7) run in different directions.





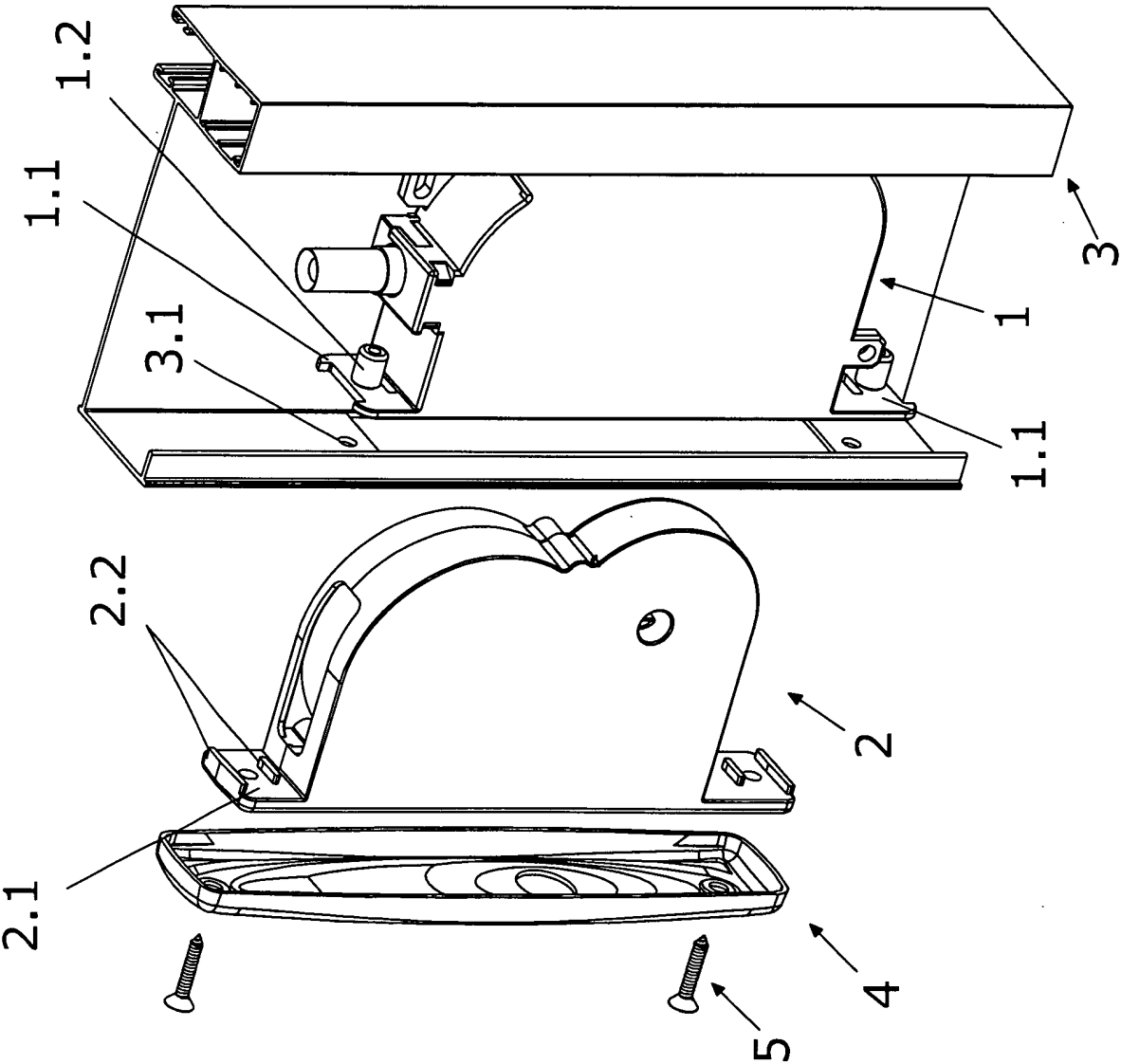


FIG. 4

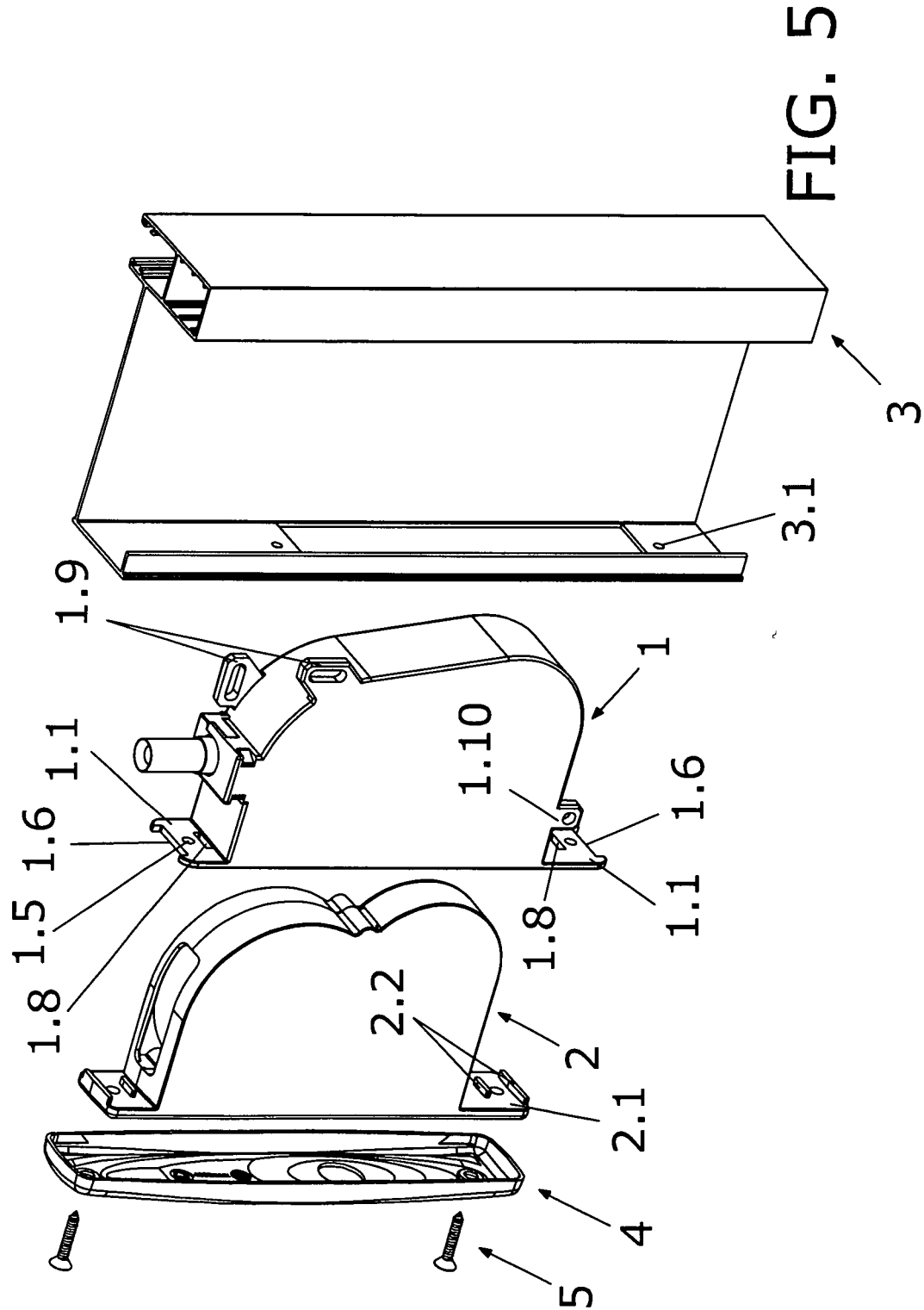


FIG. 5

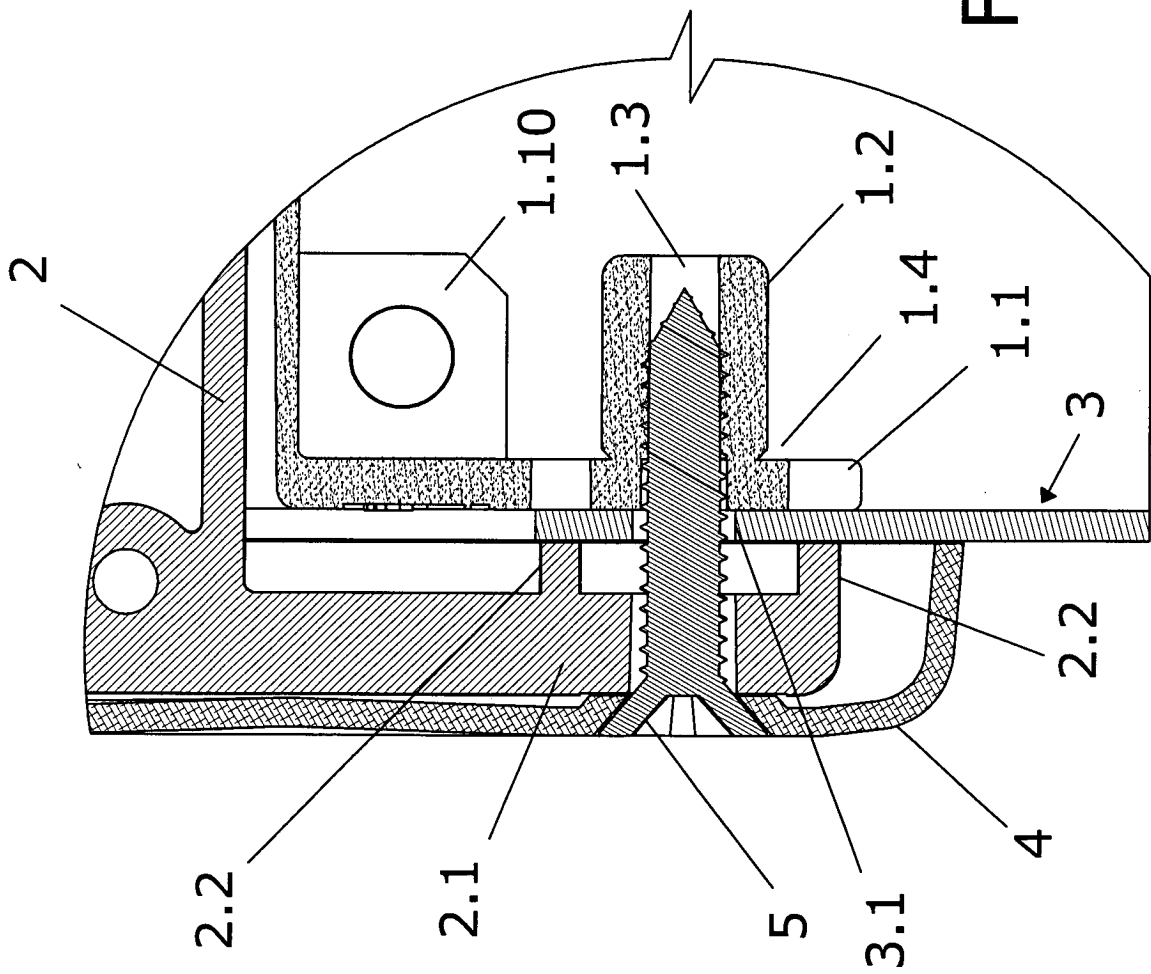


FIG. 6

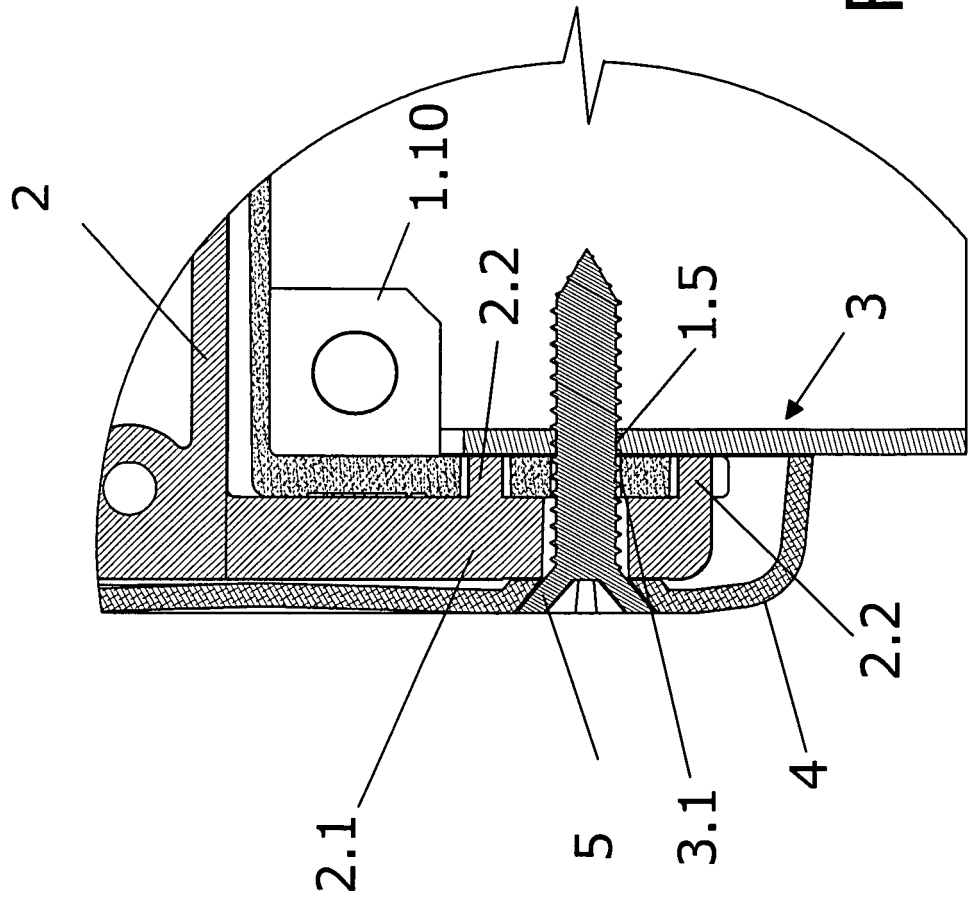


FIG. 7

INTERNATIONAL SEARCH REPORT

Intern:	Application No
	PCT/ES2005/070001

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 E06B9/78

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 E06B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ES 2 151 371 A1 (FORJAS DEL VINALOPO, S.L) 16 December 2000 (2000-12-16) cited in the application the whole document -----	1



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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Date of the actual completion of the international search

9 May 2005

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17/05/2005

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Authorized officer

Geivaerts, D

INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern:	Application No
PCT/ES2005/070001	

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
ES 2151371	A1	16-12-2000	NONE