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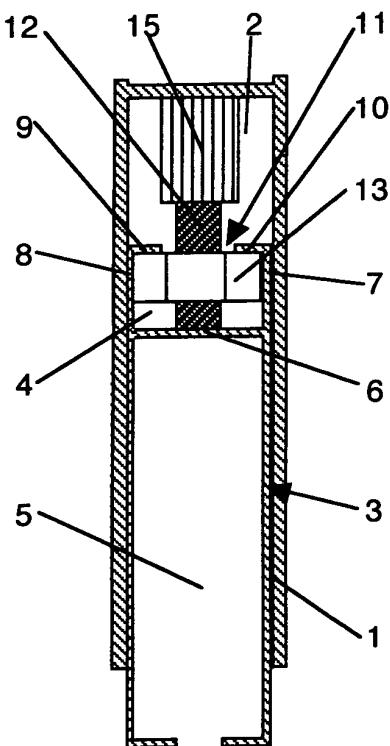
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(54) Spacer placed between the blind guide and the relevant guide-holder

(57) A spacer placed between the blind guide and the relevant guide-holder comprises a pin (12) screwed on a nut (13) and a cap (15) screwed on the pin (12); the pin (12) and the nut (13) are located in a pre-established position of a hollow portion (4) of a guide (3);

the pin (12) and the nut (13) co-operates in order to obtain a close coupling among the nut (13), the pin (12) and the hollow portion (4), said coupling being capable of fixing the pin (12) in a pre-established position of the hollow portion (4); the pin (12) protrudes from the hollow portion (4) through the longitudinal opening (11).

Fig.8



Description

[0001] The present invention relates to a spacer capable of keeping a pre-established distance between a blind guide and the relevant guide-holder in order to avoid the full insertion of the guide into the guide-holder. Advantageously, the spacer is provided with means to adjusting its longitudinal dimension in order to reach the proper distance between the guide and the guide-holder.

[0002] In general, the lateral walls of the window openings are not exactly vertical because of the manufacturing imperfections or the yielding of the building structures. Therefore, frames are used for allowing the sliding guides of the manoeuvring blind bars to be vertical in order to grant the proper sliding of the manoeuvring bars during the lowing and the lifting of the blinds.

STAND OF THE TECHNIQUE

[0003] EP 0 780 541 relates to a guide support for roll-up blinds provided with an adjusting screw for adjusting the inclination of the guide with respect to the inclination of the window opening. The support comprising clamping elements for latch means provided in a manoeuvring bar for a blind, an adjusting screw associated with the support introduced into the base of a guide for blinds, housed in a guide-holder. The adjusting screw is housed in the body of the support. The adjusting screw presents an end fitted with a groove capable of being inserted into a hole made in an element integral with the guide-holder. The hole is used as a support for the groove and for the adjusting screw. In addition, a nut screw is provided moving with the support. The nut screw allows axial movements of the support with respect to the hole. Because of the axial movements the relative movements of the support and of the guide are obtained with respect to the guide-holder in order to reach the vertical position of the guide.

[0004] The disadvantage of this invention mainly consists in the fact that the guide, partially housed in the guide-holder, is suitable to be easily and totally inserted into the guide-holder because of an erroneous manoeuvre during the mounting or an improper use of the blind. Owing to the totally insertion of the guide into the guide-holder an increase of the wear of the blind, in particular of its edge fixed to the manoeuvring bar, occurs.

[0005] Substantially, this wear is due to the fact that the manoeuvring bar does not freely slide in the guide and the edge of the blind rubs on the longitudinal opening of the guide.

AIMS AND ADVANTAGES OF THE INVENTION

[0006] The aim of the present invention is to remedy to the above mentioned disadvantages. The invention, as claimed, solves the problem of creating a spacer placed between the blind guide and the relevant guide-holder. This spacer is fitted with means for adjust-

ing its longitudinal dimension in order to keep the guide at a pre-established distance from the guide-holder.

[0007] The advantages offered by the present invention mainly consist in an easy mounting of the spacer on the guide. The mounting does not need any hole for fixing screws or similar operations which, on the contrary, are often used in the usual devices capable of avoiding the full insertion of the guide into the guide-holder.

FEATURES OF THE INVENTION

[0008] The spacer is found in a pre-established position of a longitudinal hollow portion of the guide and is fixed to the guide by means of threaded members.

[0009] A pin and a nut are inserted into a pre-established position of the longitudinal hollow portion of the guide;

the pin is screwed in the nut;

the nut presents dimensions allowing an interference between the perimeter of the nut and the longitudinal hollow portion;

the nut rotates with the pin up to reach the interference with the walls of the longitudinal hollow portion; when the rotation of the nut ends, the approach translation of the nut to the walls of the longitudinal hollow portion opposite to the separating wall dividing the two longitudinal hollow portions of the guide;

the approach translation ends when the nut pushes on the inner faces of said walls and the pin point pushes on a separating wall;

a close coupling among the nut, the pin point and the hollow portion is obtained, said coupling being capable of fixing the pin in the pre-established position of the hollow portion of the guide;

the pin protrudes from the hollow portion through a longitudinal opening.

[0010] A cap is screwed on the pin to obtain a spacer with adjustable dimension.

[0011] A longitudinal housing of the guide-holder contains the spacer to keep a pre-fixed distance between the guide-holder and the guide.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Other advantages, features and aims of the invention may be more readily understood by referring to the accompanying drawings, which concern a preferred embodiment, in which:

- Figure 1 is a sectional view of a guide-holder formed by a section bar;
- Figure 2 is a sectional view of a guide also formed by a section bar;
- Figure 3 is a sectional view of a guide into which a spacer according to the present invention is inserted before the closing manoeuvre of a nut;

- Figure 4 is a sectional view of the guide into which a part of the spacer is inserted after the closing manoeuvre of the nut;
- Figure 5 is a sectional view of a guide on which the spacer with the cap is mounted in a first length adjusting of the spacer;
- Figure 6 is a sectional view of the guide of Figure 5 inserted into the guide-holder;
- Figure 7 is a sectional view of the guide on which the spacer with the cap is mounted in a second length adjusting;
- Figure 8 is a sectional view of the guide of Figure 7 inserted into the guide-holder.

DESCRIPTION OF THE PREFERRED EMBODIMENT OF THE INVENTION

[0013] The section bar of the guide-holder 1 of Fig. 1 has a C section and is fixed to a window opening by means of screws (not shown) protruding from the guide-holder 1.

[0014] The guide-holder 1 defines a longitudinal slot 2 capable of housing the guide 3 of Fig. 2.

[0015] The guide 3 consists of two hollow portions 4, 5 divided by a separating wall 6. Both hollow portions 4, 5 longitudinally extend along the whole length of the guide 3.

[0016] A sliding block of the manoeuvring bar (not shown) slides in the first longitudinal hollow portion 5, as disclosed in EP 0 780 541.

[0017] The separating wall 6 divides the second hollow portion 4 from the first hollow portion 5. The second longitudinal hollow portion 4 is delimited by said separating wall 6 as well as by two opposite side walls 7, 8 and two walls 9, 10 adjacent, respectively, to the walls 7, 8. The walls 9, 10 define a longitudinal opening 11 extending along the whole length of the guide 3.

[0018] As shown in Fig. 3, a threaded pin 12 is introduced into the second hollow portion 4 together with a hexagonal nut 13 on which the pin 12 is screwed. The introduction of the pin 12 with the hexagonal nut 13 into the second hollow portion 4 is easily obtained by introducing the pin 12 and the hexagonal nut 13 in one of two side openings of the hollow portion 4 and moving them up to reaching the pre-established position.

[0019] As shown in Fig. 4, after the introduction into the hollow portion 4 of the end of the pin 12, screwed on the nut 13, the pin 12 is clamped in order to prevent its moving away from the hollow portion 4 and to keep its pre-established position. For this purpose, a screwdriver is inserted in a slot 14 of the pin 12 rotates the pin 12 together with the nut 13. When the nut 13, because of its rotation, interferes with the side walls 7, 8, the rotation of the nut 13 ends and its approach translation to the walls 9, 10 begins.

[0020] In fact, the hexagonal nut 13 presents two different dimensions. The first shorter dimension is the distance between two opposite sides as shown in Fig. 2.

This first dimension does not interfere with the side walls 7, 8 because it is shorter than the distance between said walls 7, 8. The second larger dimension is the distance between two opposite vertexes, as shown in Fig. 3. Because of this second dimension the nut 13 interferes with the side walls 7, 8 being said dimension larger than the distance between said walls 7, 8.

[0021] When the rotation of the nut 13 ends, the approach translation of the nut 13 to the walls 9, 10 begins.

10 This approach translation ends when the nut 13 pushes on the internal faces of the walls 9, 10 and the point of the pin 12 pushes on the separating wall 6. A close coupling among the nut 13, the point of the pin 12 and the hollow portion 4 is reached, said coupling fixing the pin 12 in a pre-established position of the hollow portion 4 of the guide 3. The pin 12 protrudes from the hollow portion 4 through the longitudinal opening 11.

[0022] The pin 12, fixed in the pre-established position of the hollow portion 4, is just a spacer between the guide

20 3 and the guide-holder 1, as shown in Fig. 4. However, this spacer has an unchangeable longitudinal dimension and, therefore, it is unsuitable to the requirements due to the dimensions of the guide 3 and the guide-holder 1.

[0023] In Fig. 5 a cap 15 is shown being screwed on 25 the pin 12 in order to get a spacer with adjustable dimension.

[0024] The cap 15 of Fig. 5 is completely screwed on the pin 12, therefore, a spacer with minimum length is obtained. Consequently, as shown in Fig. 6, showing the 30 guide 3 inserted into the guide-holder 1, the guide 3 is found at the minimum distance from the guide-holder 1.

[0025] The cap 15 of Fig. 7 is screwed on the pin 12 in order to obtain a spacer with maximum length. Therefore, as shown in Fig. 7, the guide 3 is found at the maximum distance from the guide-holder 1.

[0026] Of course, it is possible to obtain a spacer with an intermediate length, comprised between the minimum and the maximum length, suitable to the requirements due to the distance of the guide 3 from the guide-holder 1.

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Claims

1. Spacer placed between the blind guide and the relevant guide-holder; the spacer is found in a pre-established position of a longitudinal hollow (4) of the guide (3) and is fixed to the guide (3) by means of threaded members.
- 45 2. Spacer as in claim 1, **characterised by** the fact that a pin (12) and a nut (13) are inserted into a pre-established position of the longitudinal hollow portion (4) of the guide (3); the pin (12) is screwed on the nut (13); the nut (13) presents dimensions allowing an interference between the perimeter of the nut (13) and the longitudinal hollow portion (4); the nut (13) rotates with the pin (12) up to reach the
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interference with the walls (9, 10) of the longitudinal hollow portion (4);
when the rotation of the nut (13) ends, the approach translation of the nut (13) to the walls (9,10) begins;
the approach translation ends when the nut (13) 5
pushes on the inner faces of said walls (9, 10) and
the point of the pin (12) pushes on a separating wall
(6) dividing the two longitudinal hollow portions (4,5)
of the guide (3);
a close coupling among the nut (13), the point of the 10
pin (12) and the hollow portion (4) is obtained, said
coupling being capable of fixing the pin (12) in the
pre-established position of the hollow portion (4) of
the guide (3);
the pin (12) protrudes from the hollow portion (4) 15
through a longitudinal opening (11).

3. Spacer as in claim 2, wherein a cap (15) is screwed
on the pin (12) in order to obtain a spacer with ad-
justable dimension. 20
4. Spacer as in claim 3, wherein a longitudinal slot (2)
of the guide-holder (1) houses the spacer in order to
keep a pre-established distance between the
guide-holder (1) and the guide (3). 25

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Fig. 1

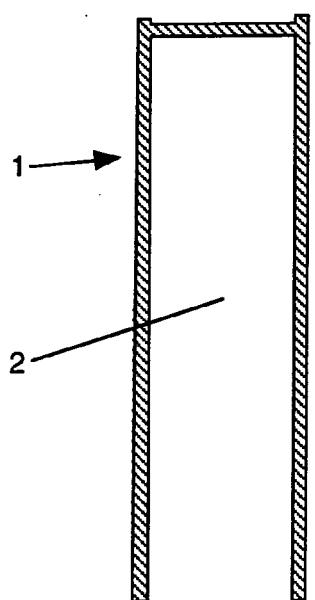


Fig. 2

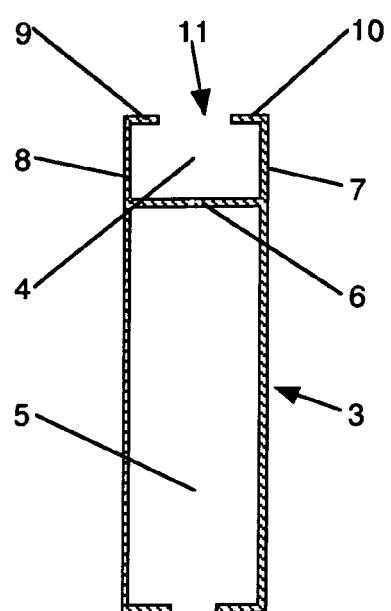


Fig. 3

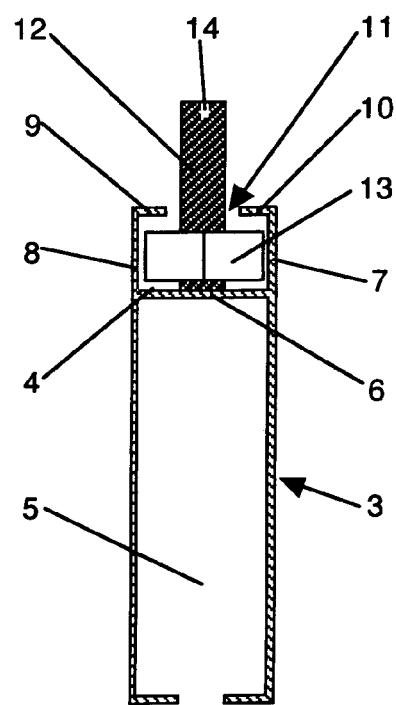


Fig. 4

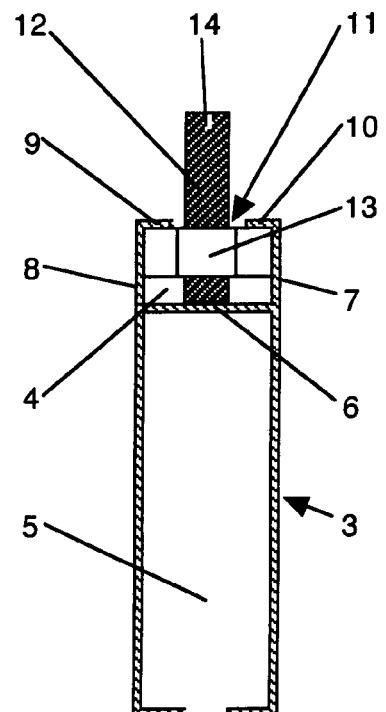


Fig.5

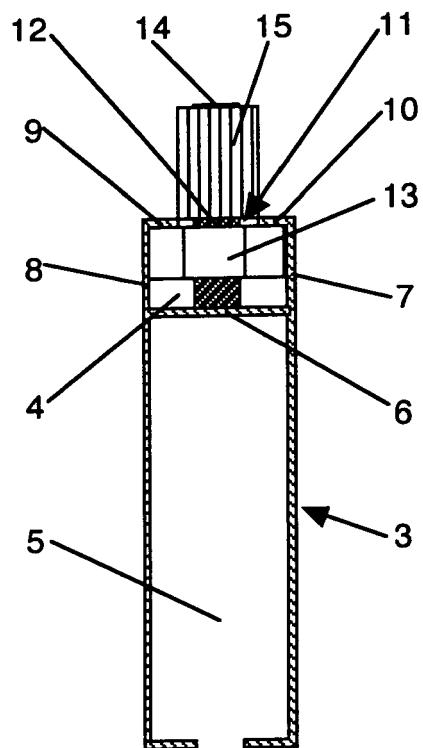


Fig.6

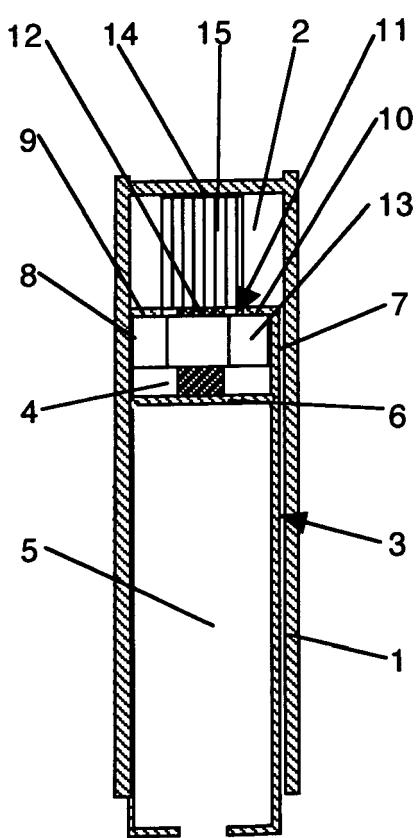


Fig.7

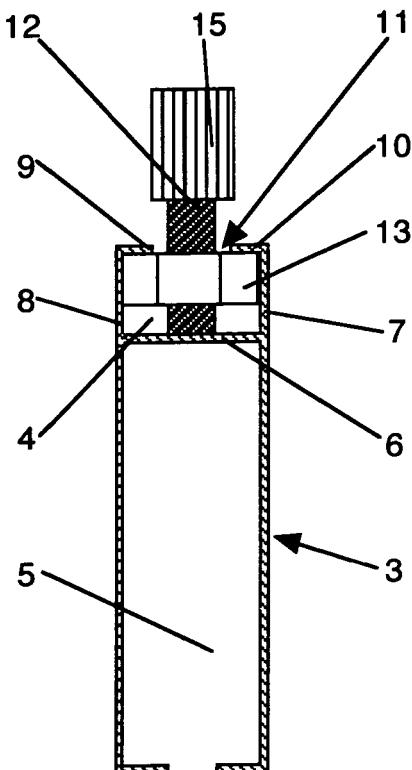
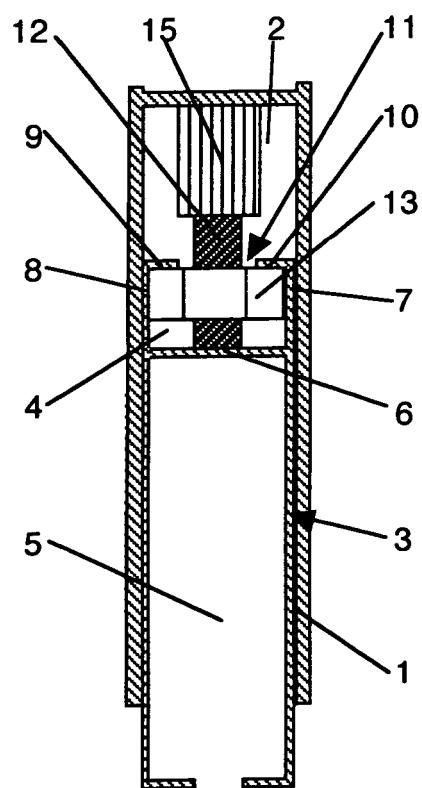


Fig.8





DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
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A	FR 2 373 663 A (BUBENDORFF RICHARD) 7 July 1978 (1978-07-07) * page 1, line 37 - page 2, line 36; figures 2-5 *	1,2	
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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			E06B
<p>1 The present search report has been drawn up for all claims</p>			
Place of search		Date of completion of the search	Examiner
Munich		18 February 2005	Knerr, G
CATEGORY OF CITED DOCUMENTS			
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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

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18-02-2005

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