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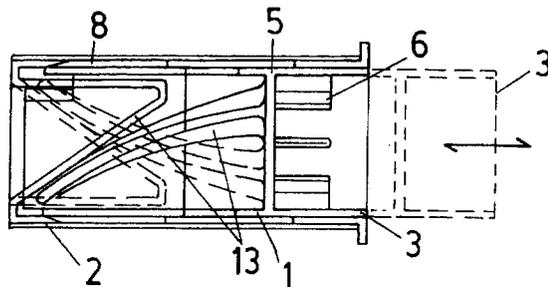
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54 **Telescoping device for the spindle of a roller blind.**

57 Formed by two pieces, the first one, cylindrical (1) irregular, incorporates two distance springs (3) and (3'), a hollow cross (4) and with symmetric arms, with ribs (5) and (5') in one of the arms, opposite to the other one with fingers (6) and a slot (7) in the interior of the external bush (2), that introduces into the second one, prismatic (2), eight-angled and with interior circular section (12), up to a hollow crossarm (14) and four pairs of fins (15).

FIG. 2



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OBJECT OF THE INVENTION

The invention refers to a telescopic device for the extension of the spindle of a roller blind, placing the spindle between both ends and thus allowing a quick-mount and dismount, that incorporates two springs in the opposite ends of a hollow crossarm, closed at one end and pressed at the other end into the interior of another cross formed by four orthogonal flats with triangular section inscribed like fins within a cylinder, the external curved side of each triangle coinciding with a sector of the circle in which they are inscribed.

The first hollow cross rests on the closed base of a tube, opened at the opposite end, for the introduction and rotation of the bearing of the spindle, placed in the exterior, resting on the internal perimetric ribs of this tube.

The second piece that contains the first cross has an eight-angled external configuration, with the first part cylindrical and the second in cross, to allow the introduction of the whole piece after the pressure of the springs that separate them.

BACKGROUND OF THE INVENTION.

Usually the spindles of the roller blinds must be cut so that their length is smaller than the supports.

As they usually do not take into account the space occupied by the blind once it has been rolled up when building the box, especially in the case of the arch bow of a window, it is nearly always necessary to have the blind unrolled and dismantled to place or move the spindle.

As a result of this, the installers normally cut the spindles shorter so that they can introduce them more easily, slightly inclined and forming an angle with the horizontal.

With the passing of time, the roller blind might fall off onto the base of the box due to the slightest side shift of the spindle.

The telescopic systems for the extension of the spindle of a blind make it easy to place the spindle between both ends, allowing a quick-mount and dismount.

The inconvenient of these telescopic systems, up to now, has been that when the central spring fails due to fixing problems or aging of the material, the supports yield under the side pressure.

DESCRIPTION OF THE INVENTION

The proposed invention has two pieces, arranged so that the first one, cylindrical and irregular, can be introduced into the second one, prismatic and with eight-angled section.

The first one incorporates two springs in the interior, that separate the first bush from the second; by pressing on these springs it introduces completely.

5 The springs are inside a hollow cross with symmetric arms, in both disc-shaped ribs placed at the ends of the bottom of one of the arms, opposite to another one with lateral fingers and a slot in the interior of the external bush.

10 Both these supports of the springs and the cross rest on a disc inside the cross that constitutes the bottom of a tube, opened at the opposite end of these fingers.

15 The internal walls of the tube are covered by a series of small symmetric equidistant cylinders that are in the opposite side to the base of the crossarm and go beyond the middle of the tube, forming a perimetric support for a bearing inside the tube, except for a small rib that allows the support on the spindle of the roller blind.

20 This system, with double spring and crossarm at the end, thanks to the distribution of weights along the crossarm and towards the bearing inside the interior bush and the symmetric arrangement of the springs, improves the functioning of this bearing, since the lateral pressure is more advisable for the useful life of the balls than the central pressure of a single spring that facilitates the lateral shifts, deteriorating the balls and making it difficult to handle.

25 With regard to the external piece, according to these different arrangements with the crossarm and the cylindrical tube, it has to be adapted internally to both configurations.

30 For this reason it is made in circular section, with a length that allows the introduction of the cylinder in its position of maximum retraction of the springs, up to an interior rib.

35 The chamber of the spring transforms into a hollow crossarm, with a series of grills joined in pairs by the corners towards the interior of the piece and arranged all the groups orthogonal to one another.

40 Four triangles are formed, with one convex side, precisely that one coinciding with the circular sector in which the sections of these fins are inscribed.

DESCRIPTION OF THE DRAWINGS.

45 In order to complete this description and for a better comprehension of the characteristics of the invention, there is a set of drawings attached to this document, which represent the following with illustrative and not limitative character:

Figure 1 is a profile of the socket.

Figure 2 is a perspective of the interior body of the socket, with a front view of the bearing

cartridge.

Figure 3 is a longitudinal section of the device, showing the arrangement of the springs.

Figure 4 is a longitudinal section of the exterior body of the socket.

Figure 5 is another section of the unit with the springs mounted.

PREFERABLE WAY OF REALIZATION OF THE INVENTION.

In view of these two figures, where the bearing and the two spindles (the spindle of the roller blind and the lateral support) do not appear, it can be observed how this telescopic bush, usually injected with plastic but that can be made of other materials, functions as an external bush, cylindrical and with a cover at one of the ends, while at the other end it comes out slightly.

The bush has two interior small ribs, arranged so that they serve as anchors for the springs.

In this bush we introduce the other one, which is a telescopic extensor thanks to the pressure of the springs, which rest on a disc inside the bush and joined to it, which is placed at such a distance that, deducing the space for the bearing, the thickness of the disc, and the cover of the external bush, plus the length of the springs in their position of maximum contraction, it is possible to introduce this bush into the first one up to the external lips of both.

This allows to establish a standard length to cut the spindles, five centimeters, or even more, not being necessary to take exact measurements on site, since the guide rails of the blind and the height of the box or the arch bow of the window can absorb, in most cases, the errors in measurements taken by the installer.

PREFERABLE WAY OF REALIZATION OF THE INVENTION

The invention consists of two pieces, arranged so that the first one, cylindrical (1) irregular, can be introduced into the second one, prismatic (2) and with eight-angled section.

The piece (1) incorporates two distance springs (3) inside a hollow cross (4) with symmetric arms, starting from ribs (5) at the ends of the bottom of one of the arms, opposite to another one with lateral fingers (6) and a slot (7) in the interior of the external bush (2).

Both these ribs (5) and the cross (4) rest on a disc (8), that at the same time is the base for a tube (9) opened at the opposite end and with small symmetric cylinders (10) on the internal wall that go beyond the middle of the tube, constituting a perimetric support for a bearing (11).

With regard to the external piece, eight-angled, it is formed in interior circular section (12), up to a rib (13) that becomes a hollow crossarm (14), with four pairs of fins (15) forming a series of orthogonal triangles.

It is not considered necessary to make any further explanation for any expert in the matter to understand the significance and advantages of the invention.

The materials, shape, size and arrangement of the elements can be varied, provided that the essence of the invention is not altered.

The terms used in this description must be taken in a wide and not limitative sense.

Claims

1. Improvement with a telescopic device for the spindle of a roller blind, formed by two pieces arranged so that the first one, cylindrical (1)-irregular, can be introduced into the second one, prismatic (2) and with eight-angled section, characterized because the piece (1) incorporates two distance springs (3) and (3') inside a hollow cross (4) with symmetric arms, starting from ribs (5) and (5') at the ends of the bottom of one of the arms, opposite to another one with lateral fingers (6) and a slot (7) in the interior of the external bush (2). Both these ribs (5) (5') and the cross (4) rest on a disc (8), that at the same time is the base for a tube (9) opened at the opposite end and with small symmetric cylinders (10) on the internal wall that go beyond the middle of the tube, constituting a perimetric support for a bearing (11), while the external piece, eight-angled, is formed in interior circular section (12), up to a rib (13) that becomes a hollow crossarm (14), with four pairs of fins (15) forming a series of orthogonal triangles.
2. Improvement with a telescopic device for the spindle of a roller blind.

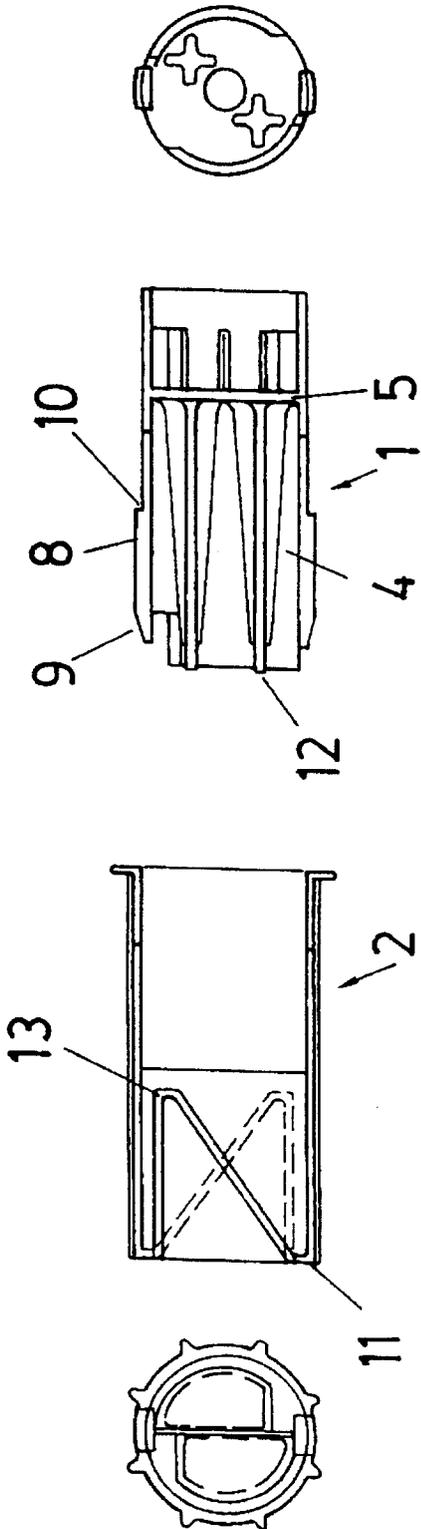
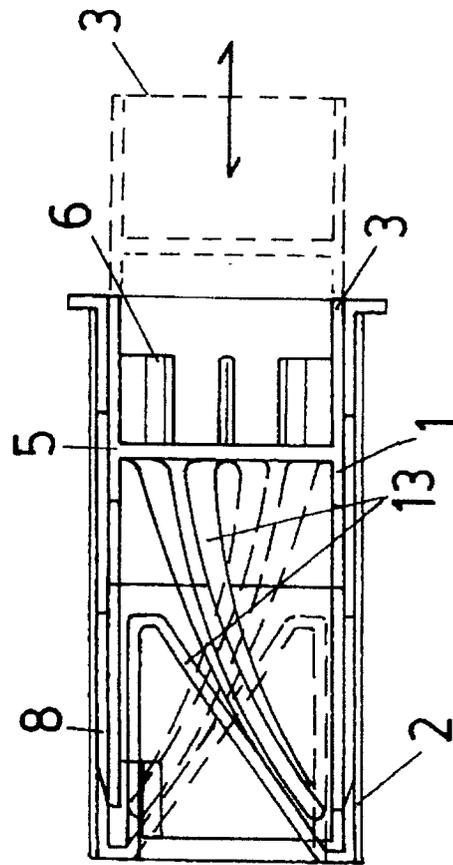


FIG.1

FIG.2





DOCUMENTS CONSIDERED TO BE RELEVANT			EP 94500168.3
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 6)
A	<u>US - A - 4 883 395</u> (KLARIC) * Totality * --	1	E 06 B 9/11 E 06 B 9/17
A	<u>AU - A - 63 410/80</u> (WOODSUN PRODUCTS PTY.LTD) * Fig. 1-3 * --	1, 2	
A	<u>DE - A - 2 626 568</u> (NEWELL COMP. INC.) * Fig. 6-12 * --	1	
A	<u>ES - A - 492 679</u> (CARPINTERIA AGRUPADA SA.) * Totality * --	1, 2	
A	<u>GB - A - 2 051 936</u> (C.J. SANDALL) * Totality * --	1, 2	
A	<u>US - A - 4 009 745</u> (ERPENBECK) * Totality * --	1, 2	TECHNICAL FIELDS SEARCHED (Int. Cl. 6)
A	<u>AU - A - 20 292/67</u> (BRENEMAN, INC.) * Totality * ----	1, 2	E 06 B F 16 B
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 26-06-1995	Examiner ROUSSARIAN
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			