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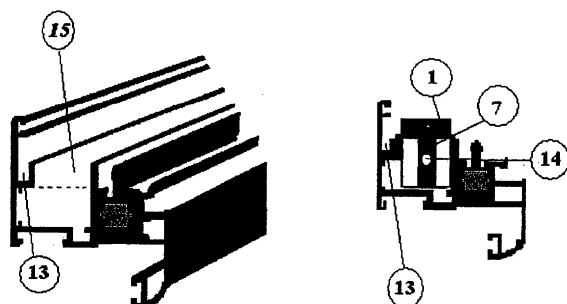
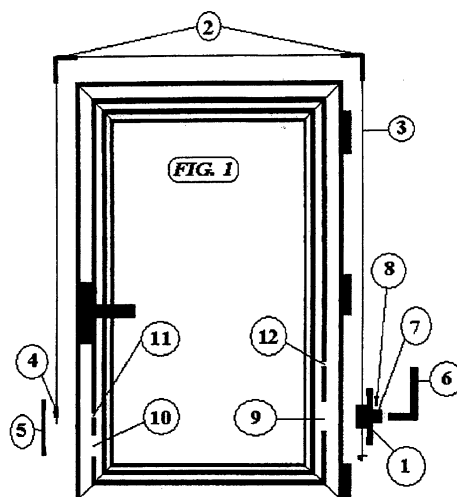
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(54) **Stabilizer for aluminium frames**

(57) Stabilizer for frames, with a pivot (7) with allen screw spanner (6) which is inserted and fixed with screws which are assembled before in a rectangular hole (9) placed on the shutter of the frame, on the side of the hinge and by a lock (4) which is placed in a second rectangular hole put at the same height of the previous hole, but not on the opposite side.

The stabilizer includes other two smaller holes (11 and 12), placed on both sides of the frame just a little over the rectangular holes (9 and 10), where a steel cable is made pass from (3) which is at first extracted from the side without hinges and the end of it is tightened to the clamp (4), by leaving it to go again in the chamber of the frame. The same job is done from the side of the hinges, where, instead, the thread is inserted in a hole placed in the stabilizer. At this point the cable is wrapped up thanks to the allen screw spanner (6) and fixed by a lock inside the stabilizer at such a tension force so that the frame maintains the squaring of 90° according to the frame.



Description

[0001] Object of this invention is a stabilizer for aluminium frames which falls within the accessories for the frames.

[0002] Actually in the technology there are not tools which let, during the time, the frames not to loose the squaring of 90°. In fact often the frames, after having been set up and assembled in the frame, during the time, become lower by loosening the above-mentioned squaring.

[0003] In art there are tools, which are applicable to the frames, with tie-beams and ropes. One of these is a Chinese patent (application number: CN20072039750U 20070608) where the iron tie-beam is placed on the head of the frame and not at the base of the same like in this invention and a Japanese patent (application number: JP20060181617 20060630) where the rope is used to fortify the grip of the frame. There are also other inventions which use ropes or tie-beams which are instead useful to let a flowing door to move (application number: GB19310022805 19310812) or to make easier the opening and the closing (application number: GB19690027634 19690530), but nobody of these inventions solve the technical problem to maintain during the time the squaring of 90°.

[0004] This invention is placed among the mechanisms which use tie-beams and ropes after the assembly of the frames. The stabilizer (1) uses such manual mechanism to create a tension of the frame, which is adjustable during the time so that the line of convergence of the frame always remains of 90° according the frame where the aluminium frame is assembled on. In the technology, systems which uses tie-beams, cables or ropes in the assembly of the frames are structured so that the tie-beam can be used to fix better the frame or to facilitate the opening and/or the closing or the flowing (whether it is a flowing frame).

[0005] These are the reasons which have pushed to create this invention, which just aims to solve the above-pointed out difficulties, to let the frame to maintain, during the time, the squaring of 90°.

[0006] This invention considers the assembly, in the opening shutter of the frame, of a pivot (7) with allen screw spanner (6), which serves to wrap a steel cable (3) so to maintain always a force of traction to have the frame perfectly aligned according to the squaring of the frame it is applied on.

[0007] By referring to the figure no.1, the stabilizer (1) in object includes two rectangular holes (9 and 10) of each mm 45x21 made, before the assembly of the frame, in the seat of the rod (15) in both sides in the height of the frame, at a height which exceeds of some centimetres the point where the inferior hinge of the frame is placed.

[0008] It also includes other two holes which are smaller of 3,5 mm (11 and 12), placed higher than the first ones at a distance of 50 mm. There is another hole of 3 mm placed in the stabilizer, more exactly in the winding machine. The stabilizer is formed by a pivot (7) e by a

allen screw (7) which acts as winding machine, which is inserted in the rectangular hole (10) from the side of the hinge and by a clamp (4) which is, instead, placed in the rectangular hole (10) of the opposite side.

[0009] The stabilizer (1) at the end is completed by a steel cable (3) which is inserted from the outside to the inside in the holes of 3,5 mm (11 and 12), by taking care that the cable (3) is drawn close under the hinges and at the perimeter of the frame so that the side cross-references (2) fit in their own seat (13).

[0010] The cable is at first taken out from the side without hinges and the end of it is closed tightly at the clamp (4), by leaving it to go again in the chamber of the frame.

[0011] The same job is made from the side of the hinges, where the cable is instead inserted in the hole of 3,0 mm (14) placed in the allen screw inside the pivot. The cable is leaved longer of almost 100 mm to make easy the connection of the knot.

[0012] At this point the cable is wrapped up by using the allen screw spanner (6) of 8 mm and the stabilizer is made fit (1) in the rectangular hole (9) by fixing it with some screws which are assembled before. The cable can be at this point put in traction and blocked with a lock at the desired force. At the end of the installation of the stabilizer the hole is closed (10) with the plate used to cover the hole (5).

Claims

1. Although the object of this patent claim for invention was described with reference to the specified and concrete realization showed in this document, it does not have to be considered limited to the details indicated and the area of protection of the patent claim has to be considered comprehensive of the modifications and of the changes which can come from the following claims:

1. Stabilizer for alluminium frames with a pivot with allen screw (7), which is inserted in a rectangular hole (9) made on the shutter of the frame, seat of the rod (15), on the side of the inferior hinge and there fixed by screws which are assembled before and by a clamp (4) which is, instead, placed in a second rectangular hole (10) placed at the same height of the previous hole, but on the opposite side, which let to solve the technical problem to maintain the squaring of 90° of the frame according the frame it is then assembled on.

2. Stabilizer for frames, we spoke about in the previous claim, with a steel cable (3) which is inserted, from outside to inside of other two smaller holes (11 and 12), placed on both sides of the shutter of the frame higher than the rectangular holes we spoke about in the claim no. 1, by taking care that the cable is drawn close

under the hinges and at the perimeter of the frame, so that the side cross-references (2) fit in their own seat (13).

3. Stabilizer for frames, we spoke about in the claims no. 1 and 2 where the cable (3) in the claim no. 1 is before extracted from the side without hinges and the end of it is tightened to the clamp (4), by leaving it to go again in the chamber of the frame. The same job is made from the side of the hinges, where, instead, the cable is inserted in a hole (14) placed in the allen screw (7), inserted in the pivot.

4. Stabilizer for frames, we spoke about in the claims no.1, 2 and 3 **characterized by** the fact that the steel cable (3) in the claims 2 and 3 is tightened in the pivot (1) in the claim no. 1 by the allen screw spanner (6) and then fixed with a pivot (8) at the desired force, to maintain always, during the time, the squaring of 90° of the frame according the one it is then assembled on.

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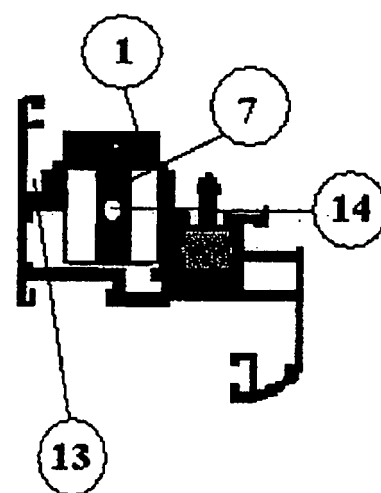
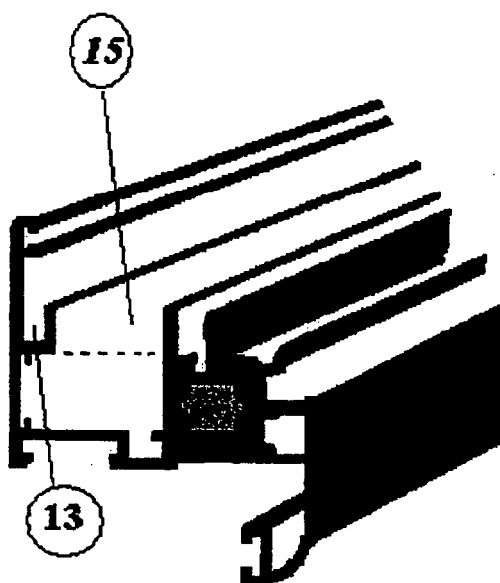
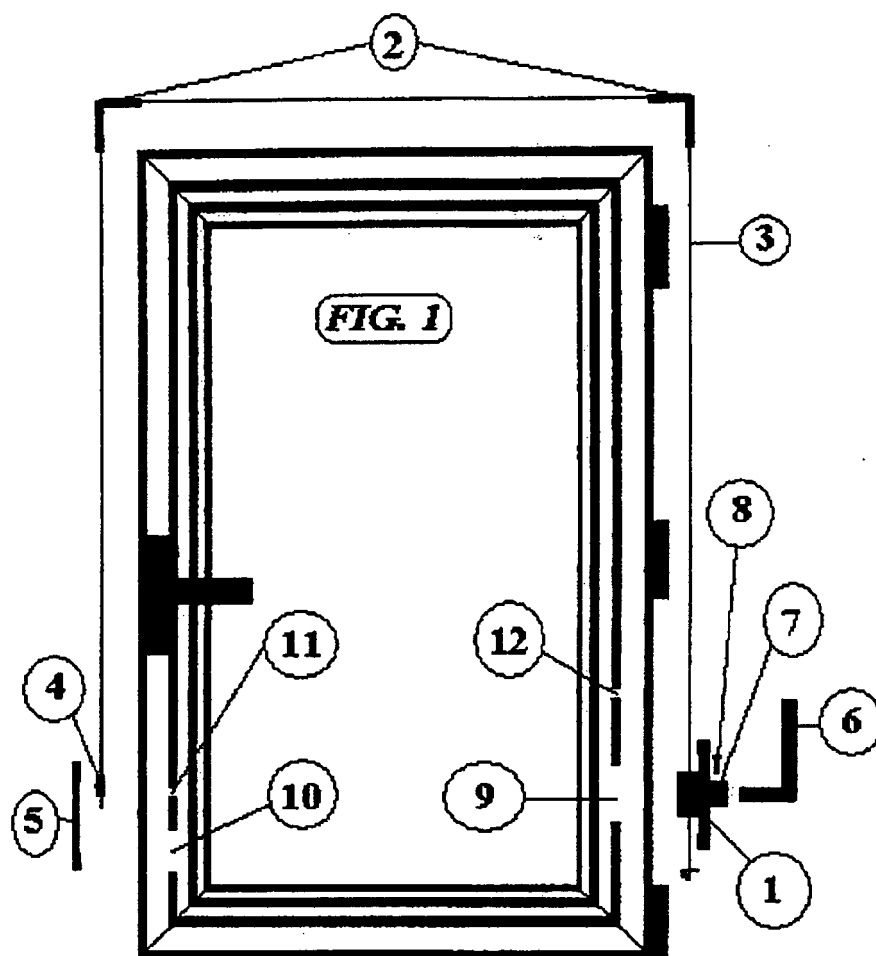
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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- CN 20072039750 U [0003]
- JP 20060181617 B [0003]
- GB 19310022805 A [0003]
- GB 19690027634 A [0003]