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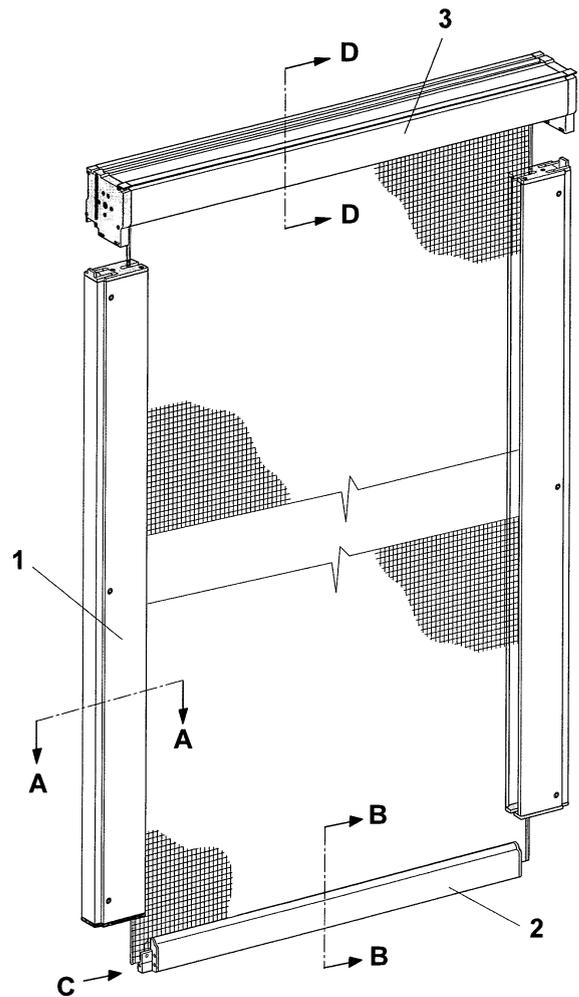
**(54) Vertical or horizontal installation system for netting/fabric/crystal with soldered or sewn zip**

(57) The present invention comprises a telescopic guide (1), a mobile or "end" component (2) with a housing for a zip and of a box (3) acting as a container for a wind-up roller (21). Said telescopic guide (1) consists of three components of extruded aluminium a channel (4) to be fixed onto a wall for carrying out any final adjustments when the wall is out-of-square ; a guide element (5) used as a support base or as a container for a PVC profile (7) inside which slides a zip (8) with soldered or sewn netting/fabric/ crystal; a closing cover (6) interlocking said guide element (5) and said channel (4).

The mobile or "end" component is also made of extruded aluminium and houses a slot (13) for the introduction of said zip (8) with netting/fabric/ crystal (18), previously soldered/sewn on. Inside said "end" component are obtained, respectively, a special space (14) for ballasting the profile, depending on the requirements, and a housing (15) for the insertion of a gaiter acting as a drainer (16).

A clamping system (18) for the netting/fabric/crystal is provided on both ends of said "end" component, produced by using special plastic sliding plates (19) and plastic clamping inserts (20).

Said zip housing (22), obtained on the rough cast, is set on the outside diameter of said extruded aluminium box, acting as a container for said wind-up roller (21).



**Fig.1**

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## Description

**[0001]** The present invention relates to a system for the installation of netting/fabric/crystal roll-up elements, suitable for both small and large size installations, realized by means of telescopic guides enabling the mounting of said installations even on out-of-square walls, while keeping the netting/fabric/crystal elements always perpendicular. The use of a "zip", applied to the netting/fabric/crystal element for the purpose of its relevant mounting, allows for a considerable clamping power in the guide even in adverse weather conditions (i.e.: strong winds, etc.).

**[0002]** The systems currently in use usually employ rigid guides which allow for a good installation of lengths of material, such as netting or fabrics, when the walls have been erected up to standard.

**[0003]** When the walls are out-of-square, the installation of netting or fabrics can be carried out through the employment of different expedients, such as, for instance, a shimming of the guide base until the guide is level, and then, any fissure present is filled with silicone with subsequent longer installation time.

**[0004]** It should be taken into consideration, however, that the silicone may change colour through time, therefore spoiling the overall effect of the installation.

**[0005]** Vice versa, installations carried out on out-of-square walls do not guarantee a proper tensioning of said netting or fabric, compromising their relevant operation and working life, beside spoiling their overall effect.

**[0006]** As regards the netting/fabric/crystal fastening onto the mobile or "end" component of said wind-up roller, the system currently in use foresees hooking said netting/fabric/crystal by means of a spinner or a double sided tape.

**[0007]** Even if widely in use, this solution cannot always guarantee a proper tensioning of said netting/fabric/crystal, often resulting in unaesthetic bulges.

**[0008]** Moreover, by employing the above solution the overall effect is further compromised as the netting/fabric/crystal soldering/sewing is always in full view.

**[0009]** On the other hand, the use of double sided tape could, in time, lead to a weakening of the netting/fabric/crystal original anchoring onto the mobile section when, for instance, strong winds blow.

**[0010]** The innovation that the present patent intends to claim comprises the use of a telescopic guide, allowing for a correct installation of netting/fabric/crystal even when the relevant walls are out-of-square, a mobile or "end" component and a wind-up roller. Inside the latter a housing for a zip, on which said netting/fabric/crystal has been previously soldered/sewn, is provided.

**[0011]** The present invention relates to a telescopic guide of extruded aluminium for a roll-up element, comprising a channel to be fixed onto a wall and a guide element, inserted on said channel, housing a zip-holder profile, inside which a netting/fabric/crystal roller element slides; characterized by the fact that it comprises a tele-

scopic system for adjusting the position of said guide element in relation to said channel by adapting said guide element position to any wall found to be out-of-square, and clamping means to mechanically lock said guide element on said channel.

**[0012]** Furthermore, the present invention also relates to a mobile or "end" component of a netting/fabric/crystal roller element, whose extruded aluminium body shape is basically prismatic and with a flat bottom, characterized by the fact that a housing for the zip of said netting/fabric/crystal element has been obtained directly on its rough cast on its upper section.

**[0013]** With said telescopic system, it is possible to adjust the position of said guide element used as a support base for the profile and its closing cover in relation to the channel, adapting it to the out of square wall, and to mechanically lock said guide on said channel by means of screws.

**[0014]** For the purpose of easing the coupling of said adjustable guide to said box, a PVC feather key is provided on the channel upper section, which slides into the slot specially provided for on said box.

**[0015]** The mobile or "end" component, also made of extruded aluminium, comprises a housing for the insertion of said netting/fabric/crystal, previously fitted with a zip, and is used for stretching out the netting/fabric/crystal material. A gaiter, acting as a drainer, is provided on said "end" component external area, while, on the lower area of this same section, a closing brush is fitted.

**[0016]** This invention further relates to a wind-up roller of extruded aluminium, located inside a box, characterized by the fact that a housing for the insertion of a zip of said netting/fabric/crystal element has been obtained directly on blank on its outside diameter.

**[0017]** The present invention is herein further described by way of non-limitative examples of realization, with reference to the figures on the accompanying drawings wherein:

- Fig. 1 is a perspective overall view of the installation system according to the present invention;
- Fig. 2 is a view of section A-A of fig. 1;
- Fig. 3 is a view of section B-B of fig. 1;
- Fig. 4 is a view of section C of fig. 1;
- Fig. 5 is a view of section D-D of figure 1.

**[0018]** The object of the present invention (fig. 1) is a system for a vertical or horizontal installation of roll-up elements of netting/fabric/crystal, etc.

**[0019]** Said system comprises at least one telescopic guide (1) extended in a longitudinal direction, a mobile or "end" component (2) basically set transverse to said telescopic guide (1) with a housing for hooking up a leading edge of a netting/fabric/crystal roll-up element (18), and a box (3) acting as container for a wind-up roller (21) of said roll-up element (18).

**[0020]** Said roll-up element (18) is a flexible element realized, for instance, in netting/fabric/crystal, and so on.

The side edges, end edge and upper edge of said element (18) are provided with a zip (8).

**[0021]** Said telescopic guide (1) fundamentally comprises three extruded aluminium sections (fig. 2) extended longitudinally and parallel to each other:

- a channel (4) extendable in a longitudinal direction, to be fixed onto the relevant wall for any final adjustments when said wall is out of square;
- a guide element (5) used as a support base and/or as a container for a zip-holder profile (7), made of, for instance, PVC, inside which a zip (8), with the netting/fabric/crystal element(18) soldered/sewn on, slides;
- a closing cover (6) interlocking said guide element (5) and said channel (4).

Said telescopic guide (1) is characterized by the fact that it represents a telescopic system enabling to adjust the position of said guide element (5) in relation to said channel (4) in a transverse direction to said channel (4), and to mechanically lock said guide element (5) onto said channel (4) by means of a clamping device.

**[0022]** Said guide element (5) is slot mounted on said channel (4); said closing cover (6), slot mounted on said guide element (5) and on the relevant stoppers (9) provided for on the plastic closing caps (10) fitted on both ends of said guide element (5), allows to hold in position a PVC profile (7). Said profile (7) houses a slot, where a sliding zip (8), with said netting/fabric/crystal element (18) soldered/sewn on, is inserted.

**[0023]** Between said profile (7) and its relevant retaining housing, formed by said guide element (5) and said closing cover (6), special brushes (11) are mounted, making said coupling specially noiseless.

**[0024]** He position if said guide element (5) in relation to said channel (4) is adjustable in a transverse direction so to compensate for any out of square sections of the wall said channel (4) is mounted on. Once the cross position between said guide element (5) and said channel (4) is adjusted, said guide element (5) is locked to said channel (4) by means of suitable clamping means, such as, for example, a closing cover (6), screwed into said channel (4), engaging said guide element (5) by slotting it.

**[0025]** Said channel (7) retaining housing is free to slide transversally on said channel (4) allowing for any final adjustment, in presence of out of square walls.

**[0026]** On the upper end section of said channel (4) a closing lid (12) is mounted, provided with a PVC key that may be inserted by sliding it into a special slot obtained on the box (3) therefore easing, improving and holding in alignment said telescopic guide (1) installation.

**[0027]** A mobile or "end" component (Fig. 3), consisting of, for example, a body of extruded aluminium, is fitted for the purpose of stretching said netting/fabric/crystal element (18).

**[0028]** Said "end" component (2) shape is fundamen-

tally prismatic, with a flat bottom, and it is transversally partitioned into an upper and lower section; inside the upper section of said "end" component (2) a slot (13) for the insertion of said netting/fabric/crystal element(18), previously

**[0029]** fitted with a "zip" (8), has been obtained from its rough cast. Inside the lower section of said "end" component (2) a relevant space (14), where a ballast ( not depicted) may be introduced for ballasting said profile according to requirements , and a slot (15) for the introduction of a gaiter (16), acting as a drainer, have been obtained, respectively.

**[0030]** A fastening system of said soldered/sewn netting/fabric/crystal element (18) is fitted on the ends of said "end" component (2) (fig. 4), said system has been realized by using special plastic plates (19) and relative plastic clamping inserts (20), also used for said "end" component (2) sliding motion inside the relevant housing obtained in said telescopic guide (1).

**[0031]** On the outside base of said "end" component (2) a brush (17) is provided enabling to locate against any end face noiselessly, while guaranteeing a proper hold.

**[0032]** A box (3) (fig. 5) acting as a container for a wind-up roller (21), is located inside said box (3).

**[0033]** Said wind-up roller (21) is of extruded aluminium and is provided, on the outside, with a relevant rough cast slot (22) for the insertion of a zip (8) with said netting/fabric/crystal element (18) soldered/sewn on.

**[0034]** Inside said wind-up roller (21), different ribs (23) are positioned, also realized on the rough cast, providing to said roller structure a high flexural strength so as to make it also suitable for large size installations.

**[0035]** Said wind-up roller (21) guarantees a saving in the relevant production time or replacement time of said netting/fabric/crystal element (18) and a greater resistance of said netting/fabric/crystal element (18) even in adverse weather conditions (strong wind, etc.)

**[0036]** Lastly, it is clear that said telescopic guide, said mobile or "end" component and wind-up roller herein described and depicted may be further modified without straying from the scope of the claims hereof.

## 45 Claims

1. A telescopic guide (1) of extruded aluminium for a roll-up element, comprising a channel (4) to be fixed onto a wall and a guide element (5), slot mounted on said channel (4) housing a zip-holder profile (7) inside which slides a roll-up element (18) of netting/fabric/crystal;  
**characterized by the fact that** it comprises a telescopic system to adjust the position of said guide element (5) in relation to said channel (4) adapting the position of said guide element (5) to any out of square on the wall, and clamping means to mechanically lock said guide element (5) onto said channel

- (4);
2. A telescopic guide according to claim 1 **characterized by the fact** that said channel (4) is fitted with a plastic feather key that may be inserted by sliding it into a relevant slot specially provided for in a rolling shutter box (3) for said netting/fabric/crystal element;
3. A telescopic guide according to claim 1 **characterized by the fact that** said telescopic guide enables to adjust the position of said guide element (5) in relation to said channel (4) in a transverse direction to said channel (4);
4. A mobile or "end" component (2) for said netting/fabric/crystal roll-up element (18), whose body is of extruded aluminium and whose shape is fundamentally prismatic with a flat bottom and **characterized by the fact that** on its upper section a slot (13) for the insertion of a zip (8) of said netting/fabric/crystal roll-up element has been directly obtained from its rough cast;
5. A mobile or "end" component according to claim 4, **characterized by the fact that** it is transversally partitioned in two sections and in its lower section a special space (14) has been obtained suitable for housing any ballast eventually required;
6. A mobile or "end" component according to claim 3 **characterized by the fact that** it presents on its side a relevant slot (15) for the insertion of a gaiter (16) acting as a drainer;
7. A mobile or "end" component according to claim 3 **characterized by the fact that** on its base a special housing has been obtained for the application of a brush (17) enabling said mobile component to locate against any end face noiselessly while guaranteeing a proper hold ;
8. A mobile or "end" component according to claim 3 **characterized by the fact that** plastic closing plates (19) are fitted on both of its side ends, provided with a clamping system for said netting/fabric/crystal (18) carried out by means of plastic inserts (20), ensuring said netting/fabric/crystal clamping throughout its length;
9. A mobile or "end" component according to claims 3 and 7 **characterized by the fact that** said plastic plates (19) are also used for the sliding of said netting/fabric/crystal (18) inside said telescopic guide (1).
10. A wind-up roller (21) , located inside a box (3) of extruded aluminium, and **characterized by the fact that** on its outside diameter, it is provided with a relevant rough cast slot (22) for the insertion of a zip (8) of a roll-up element (18) of netting/fabric/crystal;
11. A wind-up roller according to claim 10 **characterized by the fact that** ribs (23) have been rough cast obtained in its inside diameter, conferring to said roller structure a high flexural strength so as to make it also suitable for installations of large size.

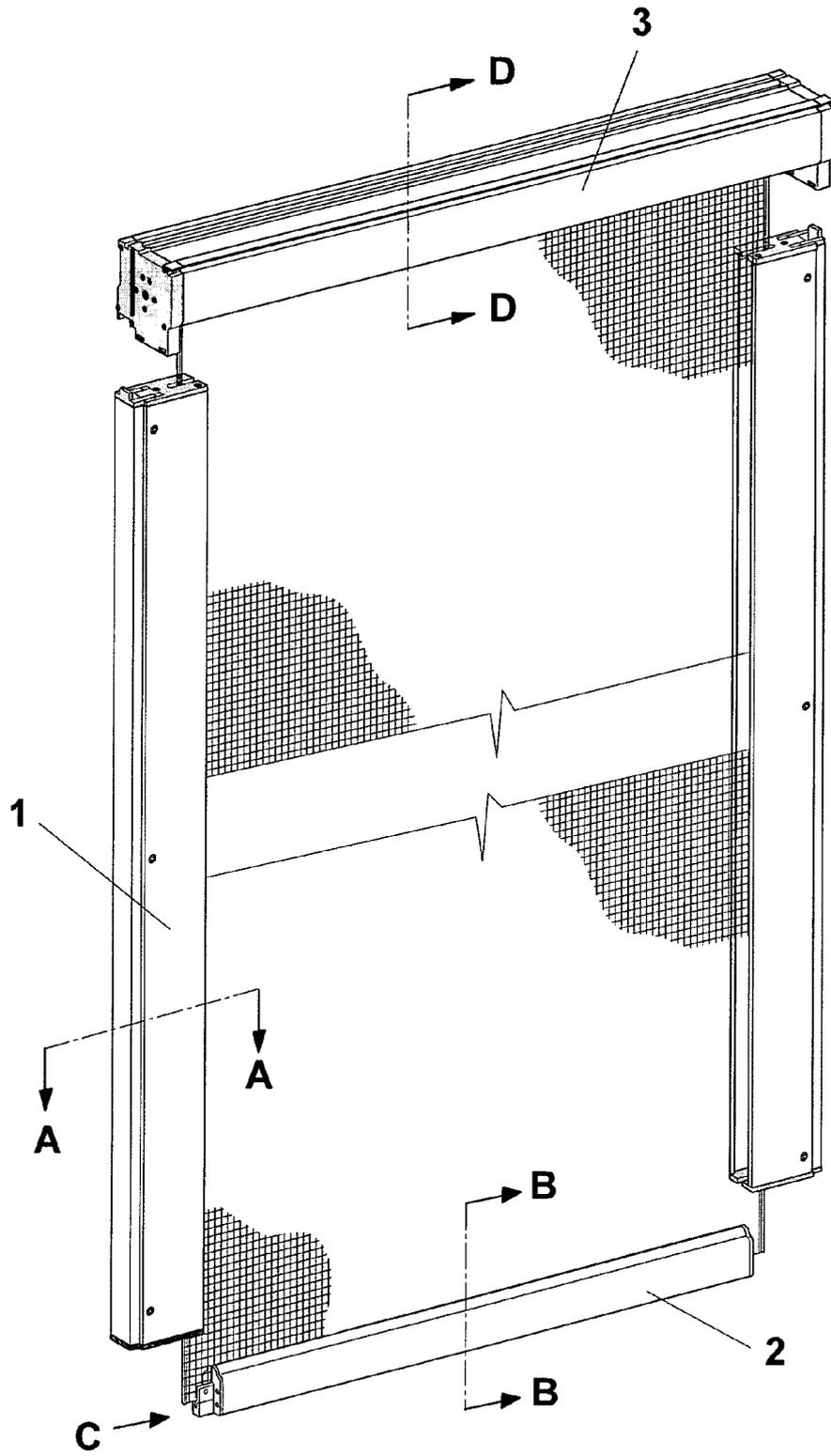


Fig.1

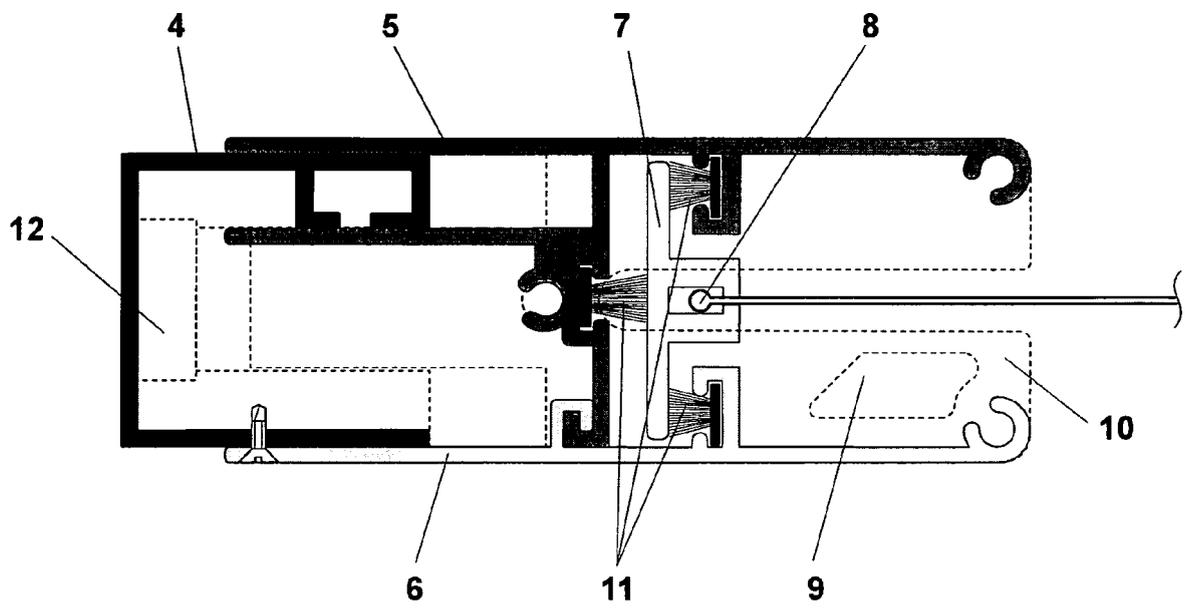


Fig.2

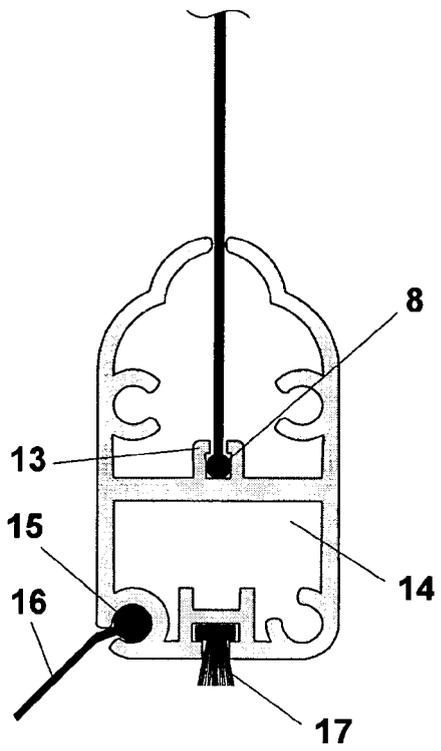


Fig.3

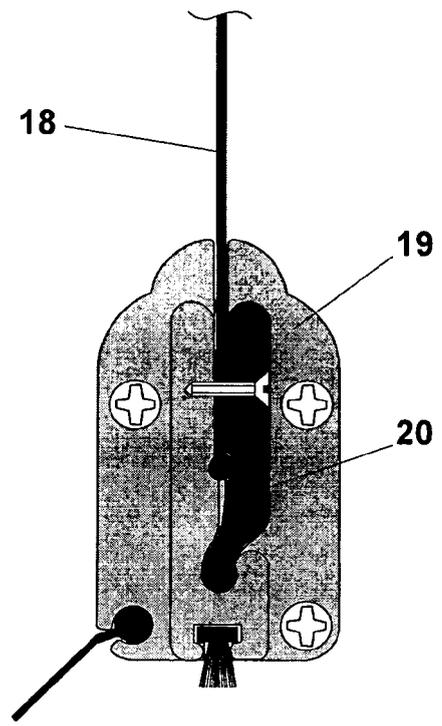


Fig.4

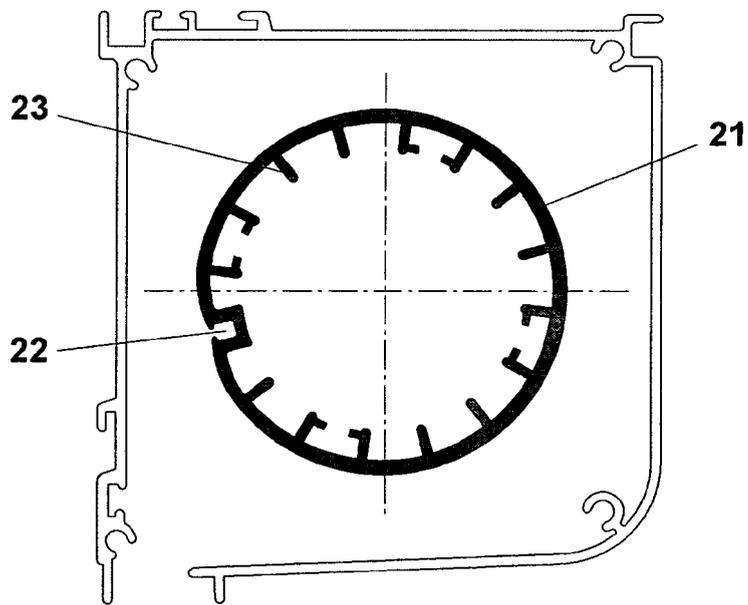


Fig.5