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(54) **Roller shutter box**

Aufsatz-Rollladenkasten

Caisson de volet roulant

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Description

[0001] The subject of this invention is the box of an overlay-type roller shutter, furnished with a snap-lock enabling closing of one of two adjacent service covers.

[0002] The known boxes of roller shutters used to have their service covers fixed from underneath or from front. Such type of a box is known from the German publication of the patent application Nº DE 10 2009 000 643A1. Opening and/or closing of the covers installed on the box is performed making use of a profiled snap-fastener furnished with spring pins snapped in profiled grooves on the covers.

[0003] The object of this invention is construction of the box of an overlay-type roller shutter, enabling opening of the box in two planes, making use the same components, whereas either the left cover and/or the right cover has the same cellular structure. This is solved by the box according to claim 1.

[0004] The box of an overlay-type roller shutter, of a rectangular prism form, constructed of plastic cellular walls separably joined, two opposite side walls of the box are of a twin structure, characterised in that the shaped-profile slot separably joined with the side cellular wall and/or with the bottom cellular wall is set in the inner corner of the said box, the slat in its cross-section perpendicular to the lengthwise axis has the shape of a near isosceles right-angle triangle, whereas at the side of the slat, there is a T-shaped guide placed inside the recess of the bottom wall or the sidewall, whereas at the other side of the triangle, there is a catch of a near V-shape, whereas in the upper parts of the walls, there are hinges placed in the corners of the top cellular wall. The shaped-profile slat can be joined interchangeably with the cellular side wall or with the cellular bottom wall by the catch, whereas the guide can be placed in the other recess. The recesses situated at the ends of the walls perpendicular to each other, are of the same shape, and they have in the cross-section the shape of a trapezoid that one wall of which has the opening.

[0005] The advantage of a box of an overlay-type roller shutter, according to this invention, is the possibility of opening the box in its two planes, making use of the same cellular components, whereas the left cellular cover and/or the right cellular cover are the same shape-product, that enables to lower production costs and/or to reduce the number of components variety.

[0006] The cellular structure of a box of an overlay-type roller shutter increases its rigidity and/or improves parameters of the thermal and/or acoustic insulation. The structure of the box facilitates the usage of its steel reinforcement, and provides a simple way of fastening the box to a doorhead using specific ties intended for the purpose. Installation of the assembled box onto the window head is facilitated with the suitable snap shape. A skew shape of the box's bottom profile facilitates drainage of water from the inside of the roller shutter, whereas the smooth surface of outer walls of the box makes it possible to glue it with Renolit.

[0007] The subject of this invention is shown in the drawings as an exemplary make; in the Fig. 1, the cross-section of the assembled box of an overlay-type roller shutter is shown; in the Fig. 2, the cross-section view of the box of an overlay-type roller shutter, having the bottom cellular wall open, is shown; in the Fig. 3, the cross-section view of the box of an overlay-type roller shutter, having the side cellular wall open, is shown; in the Fig. 4, the axonometric view, from the box interior, of the box of an overlay-type roller shutter, is shown; in the Fig. 5, the cross-section of the shaped-profile slat, perpendicular to its lengthwise axis, is shown; in the Fig.6, the axonometric view of the shaped-profile slat, is shown; and in the Fig. 7, the joint of the cellular walls made using the shaped-profile slat, is shown.

[0008] As it is shown in the drawing, the box of an overlay-type roller shutter of a rectangular prism form, consists of separably joined cellular walls **1, 2, 3, 4,** of which two opposite side walls **1, 3,** have a twin structure. Inside the inner corner **5,** there is the shaped-profile slat **6** separably joined with the cellular wall **3** and/or with the cellular wall **4,** the slat **6** in its cross-section perpendicular to its lengthwise axis **7** has the shape of a near isosceles right-angle triangle. One side **9** of the shaped-profile slat **6** has the T-shaped guide **8** placed inside the recess **10,** whereas at the other side **11** of the triangle, there is a catch **12** of a near V-shape. In the upper parts of the walls **1, 3,** there are hinges **13, 14,** placed in the corners **15, 16,** of the top cellular wall **2.** The shaped-profile slat **6** can be joined also with the wall **3** by the catch **12,** whereas the guide **8** can be placed in the recess **10'.** The recesses **10** & **10',** situated at the ends of the walls **3** & **4** perpendicular to each other, are of the same shape, having in a cross-section the shape of a trapezoid, one wall **17** of which has the opening **18.** The skew walls **19, 19',** of the recesses **10** & **10',** are inclined to the bases **20, 20',** at an angle αa equal to 45°, whereas the skew walls **21, 21',** are inclined to the bases **20, 20',** at an angle β equal to 67.5°.

[0009] Upon inserting the shaped-profile slat **6** into the side wall **3,** the bottom wall **4** can be opened, being by that operation an inspection lid, or upon inserting the shaped-profile slat **6** into the bottom wall **4**, the side wall **3** is an inspection lid.

Claims

1. Box of an overlay-type roller shutter, of a rectangular prism form and consisting of plastics cellular walls (1, 2, 3, 4) separably joined, two opposite side walls (1, 3) of the box have a twin structure, **characterised in that** inside an inner corner (5) of the box there is a shaped-profile slat (6) separably joined with a side cellular wall (3) or with a bottom cellular wall (4), the slat (6) in its cross-section perpendicular to its lengthwise axis (7) has the shape of a near isosceles right-

angle triangle, where at one side (9) of the triangle there is a T-shaped guide (8) placed inside a recess (10) of the side cellular wall (3) or inside a recess (10') of the bottom wall (4), whereas at an other side (11) of the triangle there is a catch (12) of a near V-shape, whereas in each of the upper parts of the two side walls (1, 3) there is a hinge (13, 14) placed in a corner (15, 16) of the top cellular wall (2).

2. Box according to the claim 1, **characterised in that** the shaped-profile slat (6) is joined with the side wall (3) or with the bottom wall (4) by the catch (12), whereas the guide (8) is inserted into the recess (10') of the bottom wall (4) or into the recess (10) of the side wall (3).

3. Box according to the claim 1 and/or 2, **characterised in that** each recess (10, 10') situated at the ends of the side and bottom walls (3, 4) perpendicular to each other has in its cross-section the shape of a trapezoid, of which one wall (17) has an opening (18), whereas a first skew wall (19, 19') is inclined to the base (20, 20') of the recess at an angle (α) equal to 45°, whereas the other skew wall (21, 21') is inclined to the base (20, 20') of the recess at an angle (β) equal to 67,5°.

Patentansprüche

1. Aufsatz-Rollladenkasten, in Prismaform, der aus getrennt verbundenen Plastikzellwänden (1, 2, 3, 4) besteht; zwei gegenüberliegende Wände (1, 3) des Kastens besitzen eine Zwillingkonstruktion, **dadurch gekennzeichnet, dass** sich im Inneren der Kastenecke (5) die profilierte Leiste (6), verbunden mit der Seitenzellwand (3) durch eine trennbare Verbindung oder mit der Zellwand des Bodens (4), befindet; die Leiste (6) hat im senkrechten Schnitt gegenüber der Achslänge (7) eine Form, die dem gleichschenkligen Dreieck ähnelt, wo sich auf einer Seite (9) des Dreiecks die T-Führung (8) befindet, angebracht im Inneren der Blende (10) der Seitenzellwand (3) oder im Inneren der Blende (10') der Bodenwand (4); auf der anderen Seite (11) des Dreiecks befindet sich eine Sperre (12) mit einer Form, die dem Buchstaben V ähnelt; auf beiden Oberseiten der Seitenwände (1, 3) befindet sich ein Scharnier (13, 14), angebracht in der Ecke (15, 16) der oberen Zellwand (2).

2. Aufsatz-Rollladenkasten von 1 ist der Kasten **dadurch gekennzeichnet, dass** die Leiste (6) mit der Seitenwand (3) oder Bodenwand (4) mittels einer Sperre (12) verbunden ist, und die Führungsschiene (8) wird im Inneren (10') der Bodenwand (4) oder im Inneren (10) der Seitenwand (3) angebracht.

3. Aufsatz-Rollladenkasten von 1 und/oder 2 ist der Kasten **dadurch gekennzeichnet, dass** jede Blende (10, 10"), die am Ende der zueinander senkrechten Seiten- und Bodenwand (3, 4) angebracht ist, in ihrem Querschnitt die Form eines Trapezes aufweist, dessen eine Seite (17) eine Öffnung (18) hat; die erste Schrägwand (19, 19') ist gegenüber der Basis (20, 20') der Blende unter einem Winkel (α) von 45° geneigt, die zweite Schrägwand (21, 21') ist gegenüber der Basis der Blende (20, 20') unter einem Winkel (β) von 67,5° geneigt.

Revendications

1. Caisson du volet roulant à poser en applique, en forme de parallélépipède, composé de parois en plastique alvéolaire (1, 2, 3, 4), assemblées de manière à permettre leur séparation ; deux parois opposées (1, 3) du caisson ont une structure identique **caractérisée en ce que** l'intérieur de l'angle (5) du caisson se trouve une baguette profilée (6) fixée, au moyen d'un dispositif de fixation démontable, à la paroi latérale alvéolée (3) ou à la paroi alvéolée du fond (4); la baguette (6) dans sa section perpendiculaire à l'axe longitudinal (7) a la forme proche d'un triangle isocèle où d'un côté (9) du triangle se trouve le guide en forme de la lettre T (8) placé à l'intérieur d'un renfoncement (10) de la paroi latérale alvéolée (3) ou à l'intérieur du renfoncement (10') de la paroi du fond (4); de l'autre côté (11) du triangle se trouve le dispositif d'encliquetage (12) de forme proche de la lettre V ; sur les deux parties supérieures des parois latérales (1, 3) se trouve une charnière (13, 14) placée dans l'angle (15, 16) de la parois alvéolée supérieure. (2).

2. Le caisson selon la revendication 1, **caractérisé en ce que** la baguette (6) est fixée à la paroi latérale (3) ou à la paroi du fond (4) au moyen du dispositif d'encliquetage (12) alors que le guide (8) est placé dans le renfoncement (10') de la paroi du fond (4) ou dans le renfoncement (10) de la paroi latérale (3).

3. Le caisson selon la revendication 1 et / ou 2, **caractérisé en ce que** la section de chaque renfoncement (10, 10") situé à l'extrémité de la paroi latérale et de la paroi du fond (3, 4) perpendiculaires entre elles, a la forme d'un trapèze dont un côté (17) possède un orifice (18) ; la première paroi oblique (19, 19') étant inclinée par rapport à la base (20, 20') du renfoncement à l'angle (α) égal à 45° alors que la deuxième paroi oblique (21, 21') est inclinée par rapport à la base du renfoncement (20, 20') à l'angle (β) égal à 67,5°.

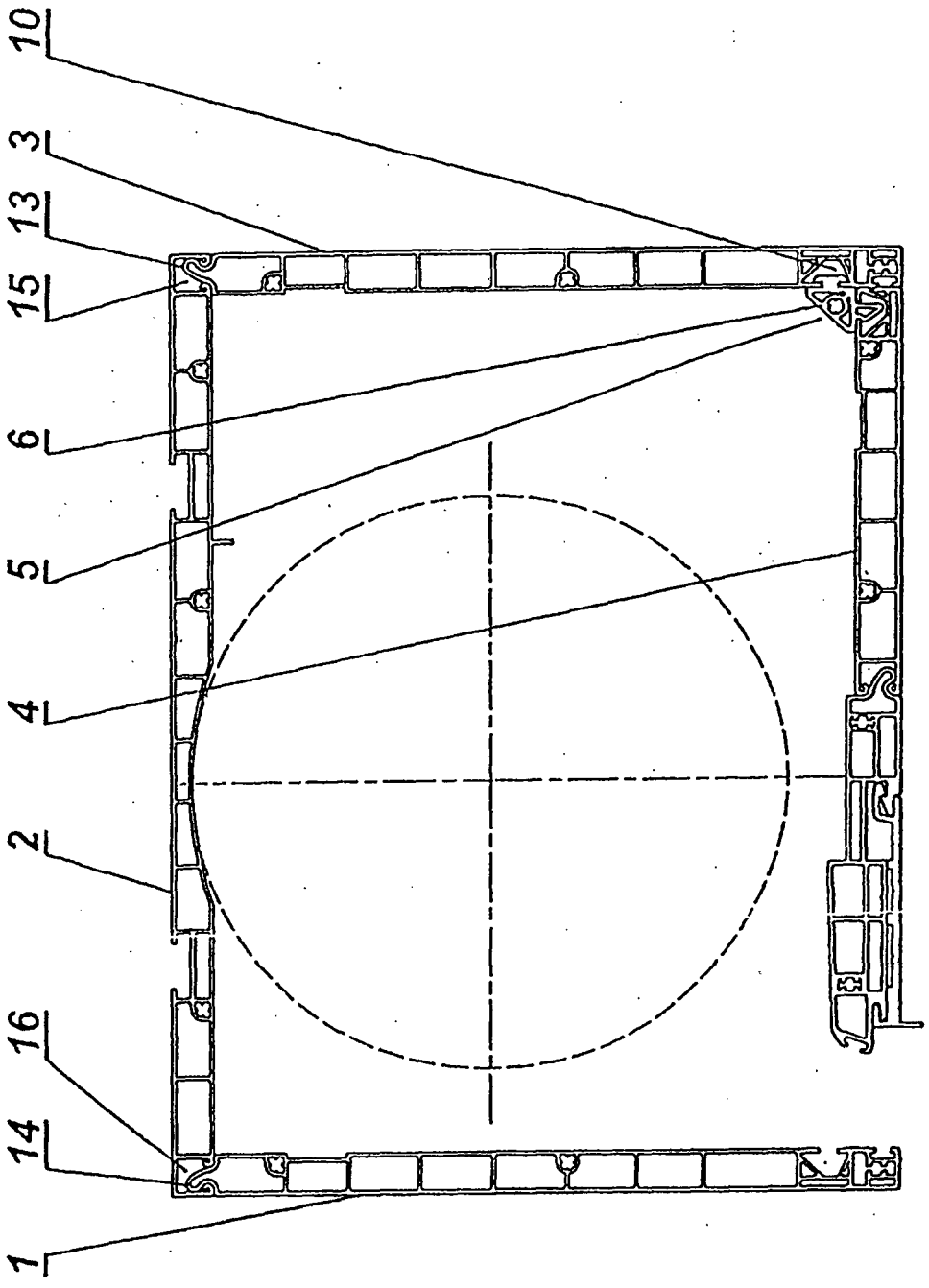


Fig. 1

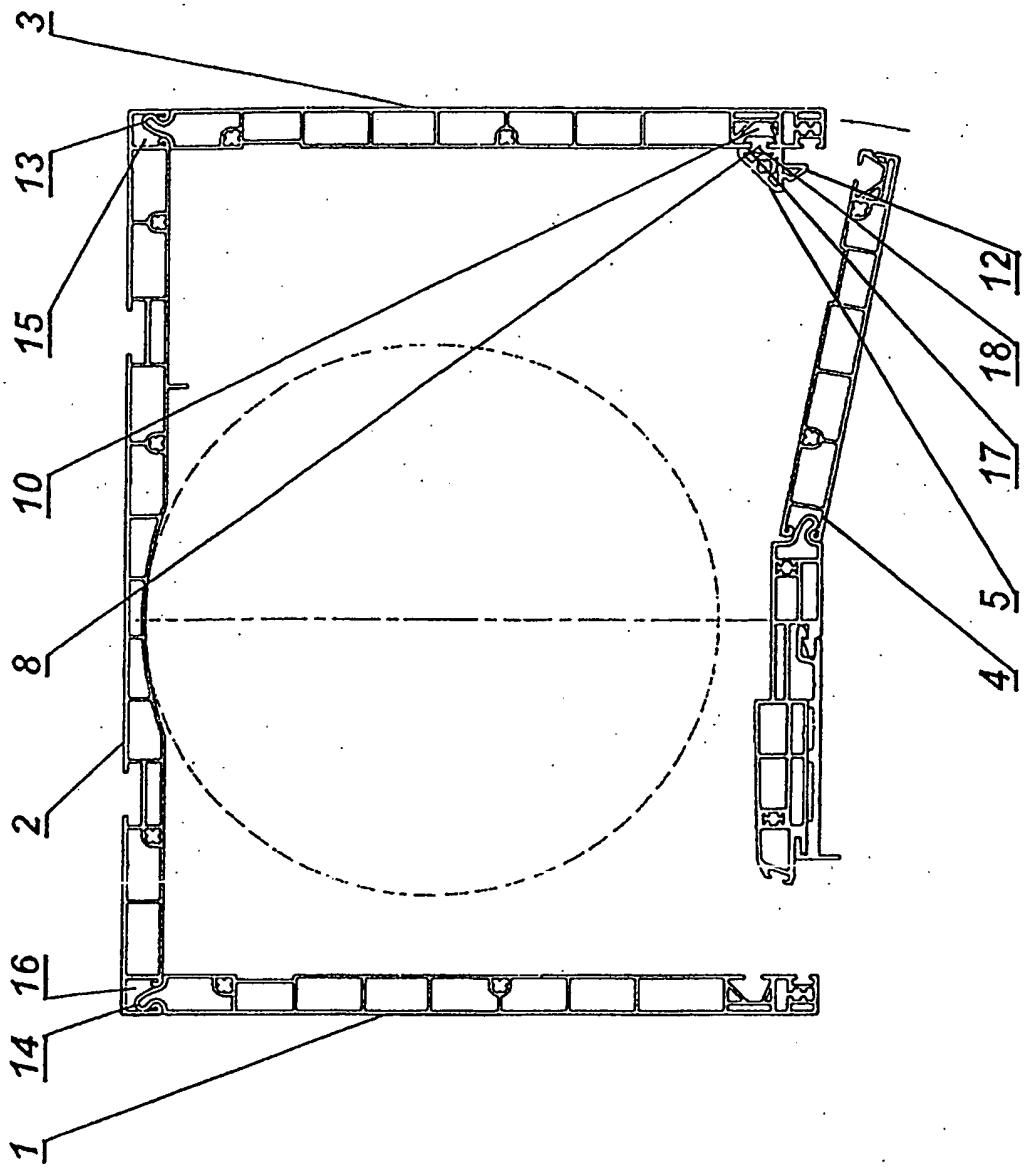


Fig. 2

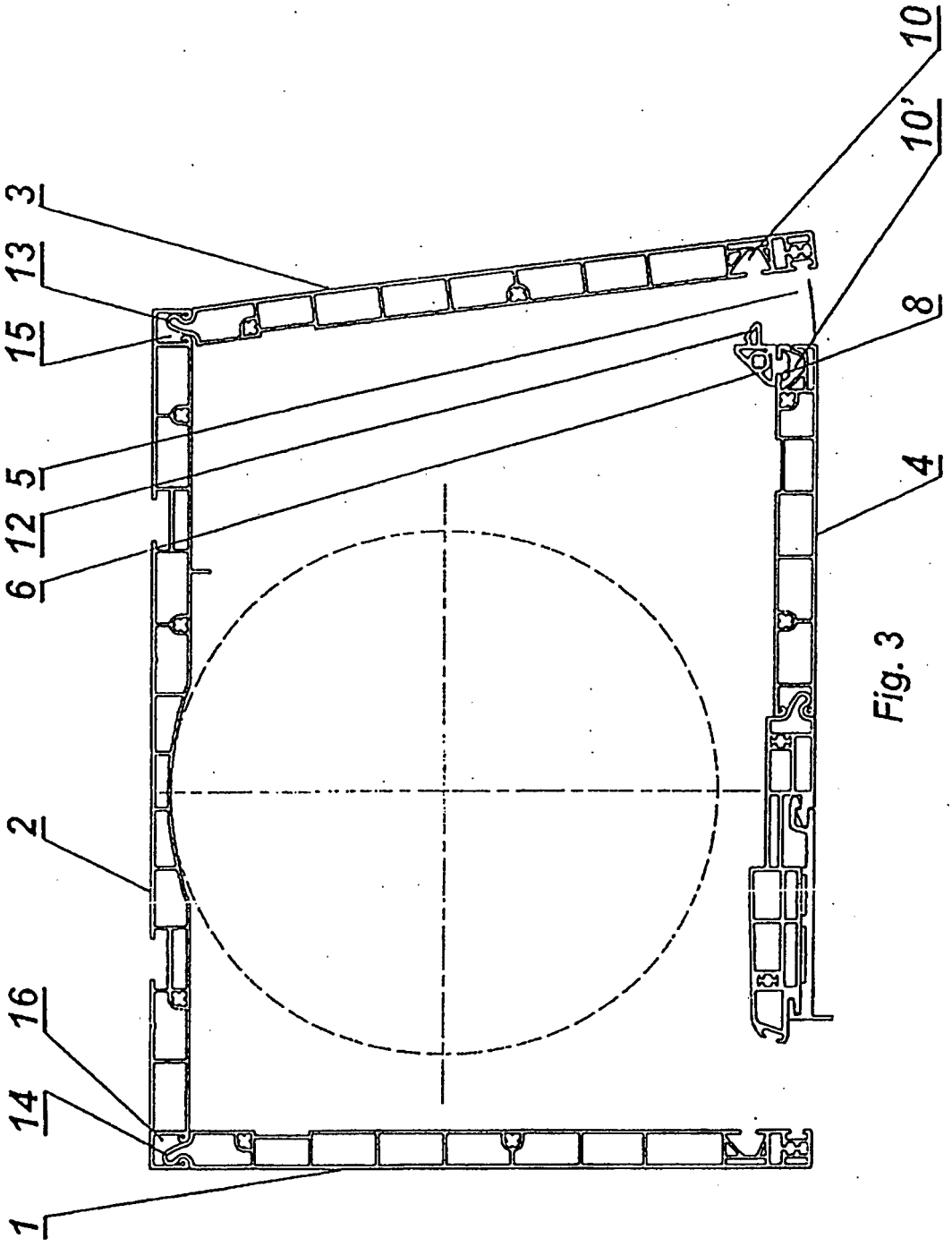


Fig. 3

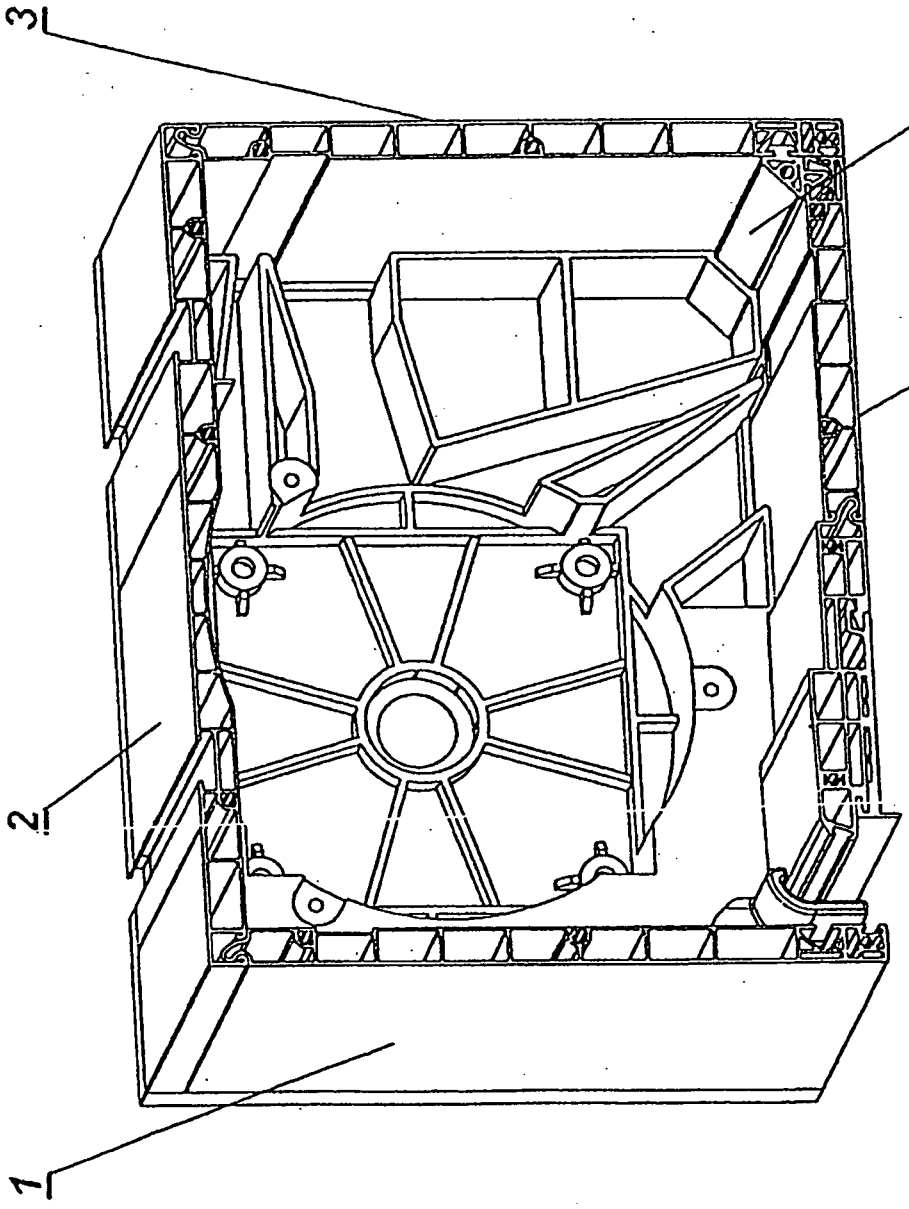


Fig. 4

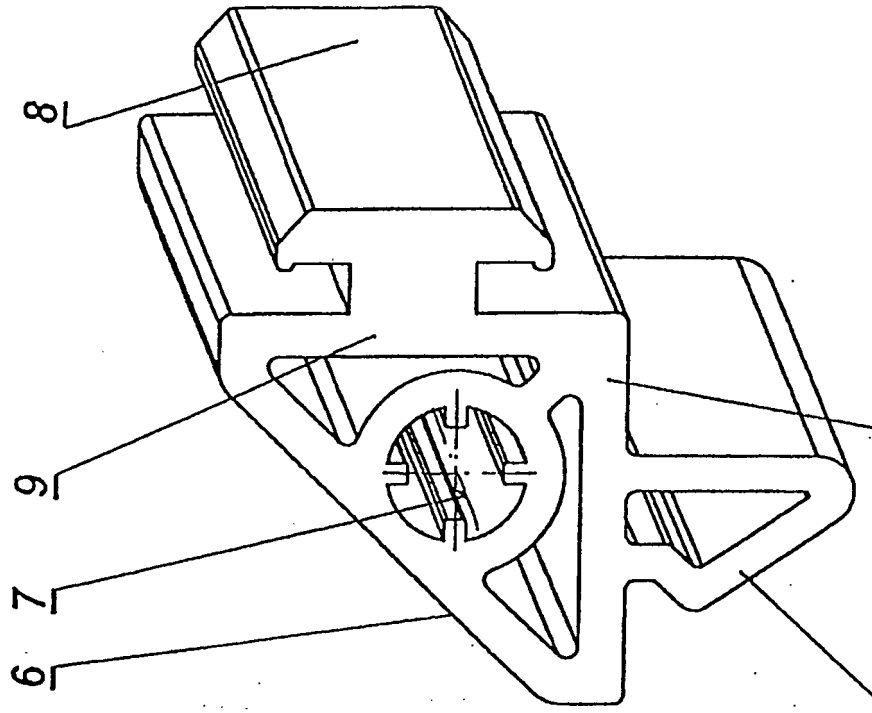


Fig. 6

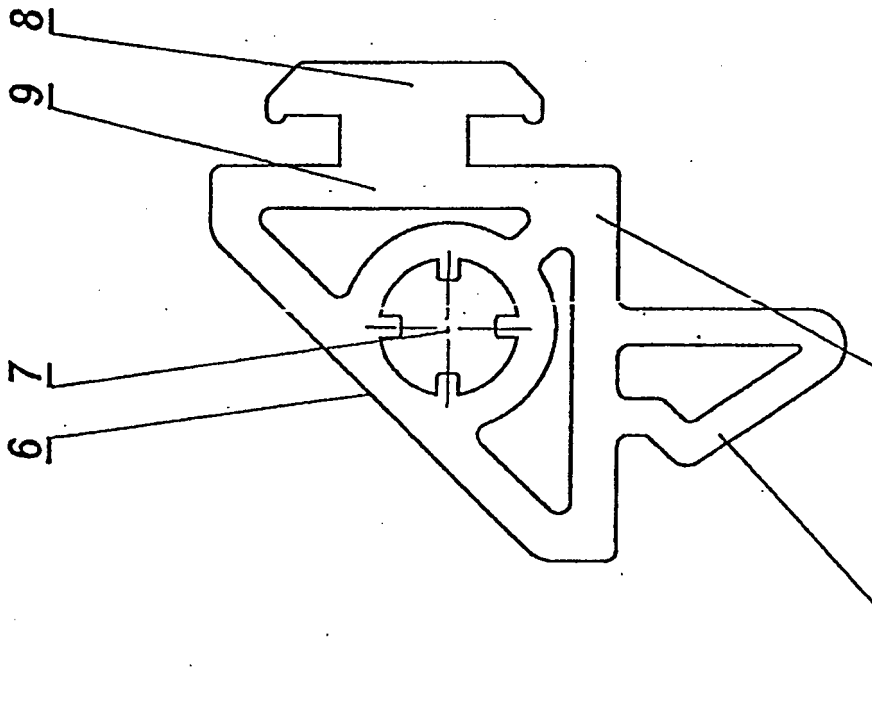


Fig. 5

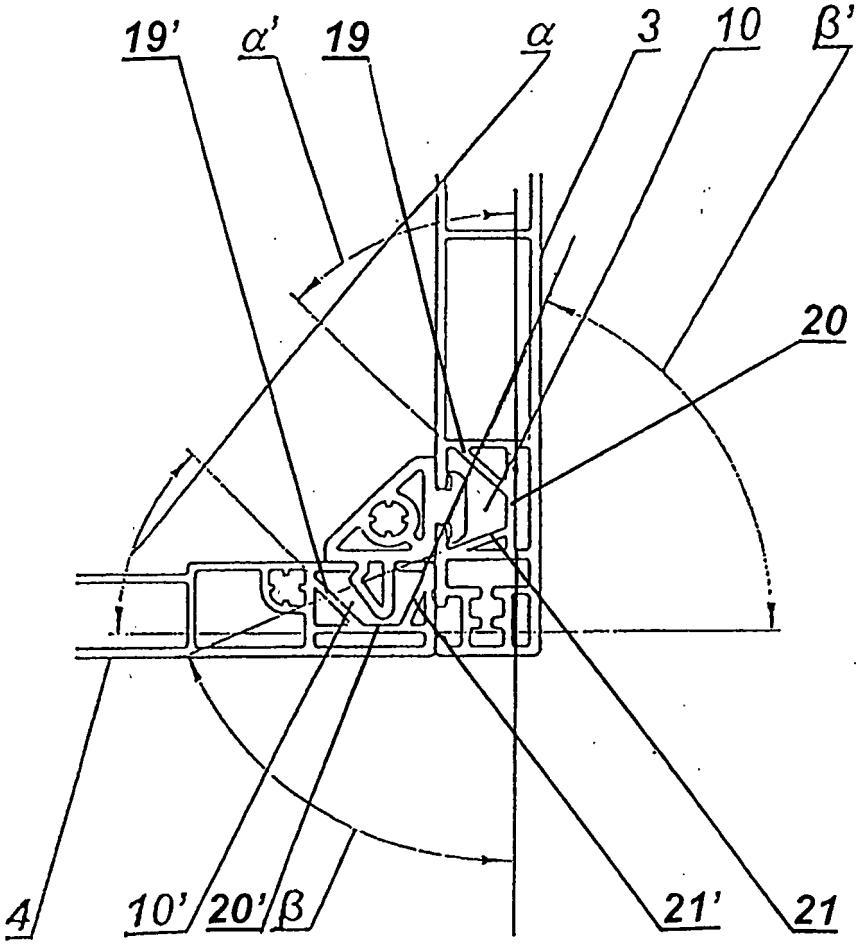


Fig. 7

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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