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(54) BOX FOR EXTERNAL FLUSH-MOUNTED ROLLER BLIND

(57) The box for the external flush-mounted roller blind in the shape of a cuboid, consisting of an upper wall (1) forming a whole with the front wall (2) and rear wall (3) and two side walls (4) connected to them, while the box contains an inspection cover (7) from the bottom, is known for the fact that the inspection cover (7) made of opaque or transparent multi-cellular plastic contains several parallel hooks (8) along its entire length. To the front wall (2) there is a profile (9) with a socket (10), in which the outer detachable hook of the inspection cover is seated. The side walls (4) are folded in the lower part and multi-cellular plastic mounting strips (12) of the shape similar to the channel bar are fixed to them from the bottom. The mounting strips have sockets (13) in which the ends of the detachable hooks (8) are seated. Socket (10) is located below the lower edges of the side walls. Mounting strip (12) has the upper arm longer than the lower arm and has a weaning, which is located in the indentation of the side wall (4). The box is optionally equipped with a voltage supply unit and an aluminium profile with a LED strip plugged in as a light source. A protective profile made of profiled sheet metal is optionally fixed to the front wall. The box can also contain a mosquito net.

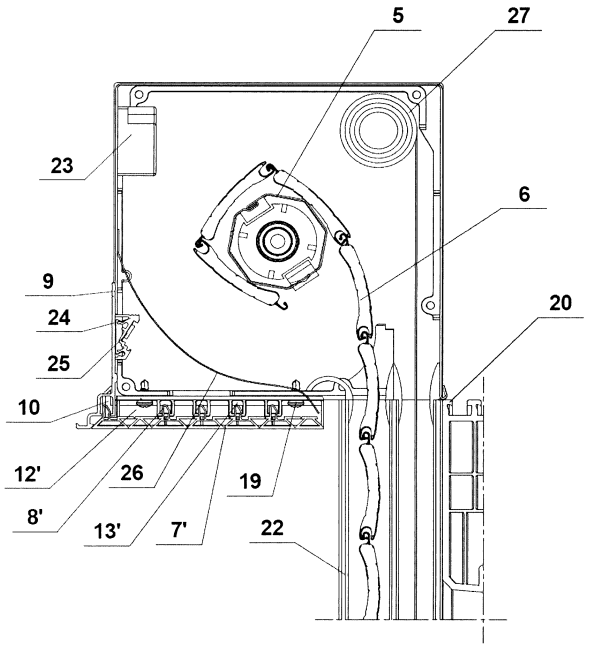

Fig. 8

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Description

[0001] The object of the invention is a box for external flush-mounted roller blind, which is a roller blind shaft casing with the roller blind armour wound on it.

[0002] The description of the Polish patent application P.390993 talks about a top-mounted roller blind box equipped with a slam lock, which enables opening one of the adjacent inspection covers. The box of a cuboid top-mounted roller blind is composed of four detachable plastic chamber walls connected together, of which two opposite side walls have a twin structure. A detachable profile slat is connected in the inner corner with the side chamber wall, or the bottom chamber wall. There is a guide from the side. On the other side there is a latch. In the upper part of the chamber walls there are hinges.

[0003] From the description of the Polish invention application P.353679 a window roller-blind box in the shape of a cuboid, which consists of a covers connected with each other, two vertical front walls and an inspection flap located at the bottom of the box. The inspection flap on the one side is mounted to the one front wall by means of a connector, and is connected to the socket by means of another connector.

[0004] According to the invention, the external flush-mounted roller blind box consists of an upper wall, which is a monolithic whole with a vertical front wall and rear wall, and two side walls connected to them, in which a shaft with a wound on roller blind armour is seated on bearings, and the bottom of the box contains an inspection cover, which is made of opaque or transparent plastic in the form of a multi-cellular wall and contains several parallel hooks along the entire length of the box. Front wall is connected to a profile with a socket at the bottom, in which the detachable outer hook of the inspection cover is seated. This socket is located below the lower edges of the side walls. Side walls in the lower part are bent and the horizontally bent fragments are connected from the bottom to the multi-cellular plastic mounting strips of the shape similar to the channel bar. The mounting strips have sockets on the outside, in which the detachable ends of the hooks of the inspection cover are seated. Each mounting strip has an upper arm longer than the lower arm and has a weaning, which is located in the indentation of the side wall. A voltage supply unit is seated in the box. There is an optional aluminium profile with LED strip or other light source plugged in to the front wall. Optionally, a protective profile made of profiled sheet metal can be attached to the front wall inside the box along the entire length of the inspection cover. The use of a protective profile provides protection against dirt and water as well as additional reflection of light rays. The box may contain a seated mosquito net.

[0005] The roller blind box contains an easily open and closed inspection cover. The spring-loaded connection of the hooks to the sockets ensures effective attachment of the cover, and its chamber structure improves the insulation parameters of the box. The construction of the box allows the internal dimensions of the standard box to remain unchanged, despite the increased thickness of the inspection cover. The standard boxes, used in series, are of precisely defined sizes. If the inspection cover is required for a smaller box, it can be reduced by cutting off part of the cover. The mounting strips can be shortened in the same way. Optional use of an inspection cover made of plastic transmitting light rays and placement of various light sources or sources inside the box, in any place, can be used in external roller shutter boxes of any size. It is possible to illuminate windows, facades, terraces, without using additional lighting (there is a possibility to connect it with a smart house installation). According to the invention, the solution is characterized by the simplicity of construction and ease of its implementation.

[0006] The object of the invention is shown in the examples of execution on the drawing on which the fig. 1 represents the roller blind outer box in cross section, fig. 2 shows the elements of the box in perspective view, fig. 3 and fig. 4 - inspection covers in different sizes and number of hooks according to it, fig. 5 - profile, which is connected to the front wall, fig. 6 - mounting strip in side view, fig. 7 - connection of the box side wall with the mounting strip in the cross section, fig. 8 - box with optional light source and optional mosquito net.

Example I

[0007] The box of the external flush-mounted roller blind has the shape of a cuboid. It consists of an upper wall 1, which is a monolithic whole with a vertical front wall 2 and a rear wall 3, and two side walls 4 connected to them. In the side walls 4 seated on bearings is shaft 5, on which armour 6 is wound. The box has an inspection cover 7 in the form of a multi-cellular wall made of opaque plastic, which has hooks 8 located parallel to each other along the entire length of the inspection cover. Outside, to the front wall 2, there is a profile 9 with a socket 10 in the lower part and a wedge-shaped outlet 11. In this socket is seated a detachable outer hook of the inspection cover on the whole length of the box. Outlet 11 enables the end of the inspection cover to be supported when opened. Socket 10 is located below the lower edges of side walls 4 enabling the cubic capacity of the box to remain unchanged in relation to the standard flush-mounted box. Side walls 4 in the lower part are bent towards the centre of the box and to these horizontally bent fragments are fixed, from the bottom, multi-cellular plastic mounting strips 12 of the shape similar to the channel bar, which have sockets 13. The upper arm 14 of each mounting strip 12 is longer than the lower arm 15 and has a weaning 16, which is located in the indentation 17 of the side wall 4. A weaning and an indentation make it possible to position the mounting strip 12 in relation to the side wall 4. The mounting strips are also equipped with stabilizers 18 which position them before mounting. The longer upper arm 14 allows it to be fixed to the side wall 4 with screws 19. The fixed inspection cover 7 in

sockets 13 covers these screws. Armour slides 21 and armour guides 22 are seated in the box. Removal of the inspection cover comes down to grasping its end and inflecting. Hooks 8 of the inspection cover come out of the mounting strip sockets 12. Initially, the opposite end of the inspection cover is laying on the outlet 11 of profile 9, next the last outer hook, which is seated in profile 9, is disconnected. Mounting the inspection cover consists of placing its hooks 8 under the sockets 13 in the mounting strips 12 and under the socket 10 in the profile 9 and pressing the inspection cover.

Example II

[0008] The box for the external flush-mounted roller blind in the shape and construction as in example I, additionally contains a voltage supply unit 23 and an aluminium profile 24, to which attached are LED strip 25, a protective profile 26 made of shaped sheet metal and an optional mosquito net 27, which, when lowered, is located between the roller blind armour 6 and the window frame 20. The box has an inspection cover 7' in the form of a multi-cellular wall made of transparent plastic, which has hooks 8 located parallel to each other along the entire length of the inspection cover. In socket 10 of the profile 9 a detachable outer hook of the inspection cover is seated on the whole length of the box. This socket is located below the lower edges of the side walls. The hooks 8' of the inspection cover are seated in sockets 13' of multi-cellular plastic mounting strips 12'. Protective profile 26 made of shaped sheet metal, in addition to protecting the inspection cover against dirt and water flowing down from the roller blind armour 6, has a reflective function for light rays.

List of designations

[0009]

1 - upper wall,
2 - front wall,
3 - rear wall,
4 - side wall,
5 - shaft,
6 - roller blind armour,
7, 7' - inspection cover,
8, 8' - hook,
9 - profile,
10 - socket,
11 - outlet,
12, 12' - mounting strip,
13, 13' - socket,
14 - upper arm of the strip,
15 - bottom arm of the strip,
16 - weaning,
17 - indentation,
18 - stabilizer,
19 - screw,
20 - window frame,
21 - armour slide,
22 - armour guide,
23 - voltage supply unit,
24 - aluminium profile,
25 - LED strip,
26 - protective profile,
27 - mosquito net.

Claims

1. The box for the external flush-mounted roller shutter in the shape of a cuboid, consisting of an upper wall, which is a monolithic whole with a vertical front wall and rear wall, and two side walls connected to them, which are perpendicular to the shaft bearing in these walls with the roller blind armour wound on it, while the bottom of the box contains an inspection cover connected to it separately, **known for** the fact that the inspection cover (7,7') in the form of a multi-cellular wall of transparent or opaque plastic contains at the whole length several parallel hooks (8,8') and to the front wall (2) a profile (9) is fixed with a socket (10) in the bottom, to which a detachable far inspection cover hook (7,7') is connected, whereas side walls (4) in the lower part are bent and to those horizontally bent fragments, multi-cellular mounting strips are connected from below (12, 12') with a shape close to a channel bar, having sockets (13, 13') to which separately seated are detachable hooks ends (8, 8') of the inspection cover (7, 7') and, as an option, there is a voltage supply unit (23) and light source (25) connected to the box.

2. External roller blind box, according to the claim 1, **known for** the fact that the socket (10) is located below the lower edges of the side walls (4).

3. External roller blind box, according to the claim 1, **known for** the fact that the mounting strip (12, 12') has the upper arm (14) longer than the lower arm (15) and has a weaning (16), which is placed in the indentation (17) of the side wall (4).

4. External roller blind box, according to the claim 1, **known for** the fact that to the front wall (2), inside the box, there is an aluminium profile (24) with LED strip (25) plugged in.

5. External roller blind box, according to the claim 1, **known for** the fact that a protective profile (26) is fixed to the front wall (2), inside the box.

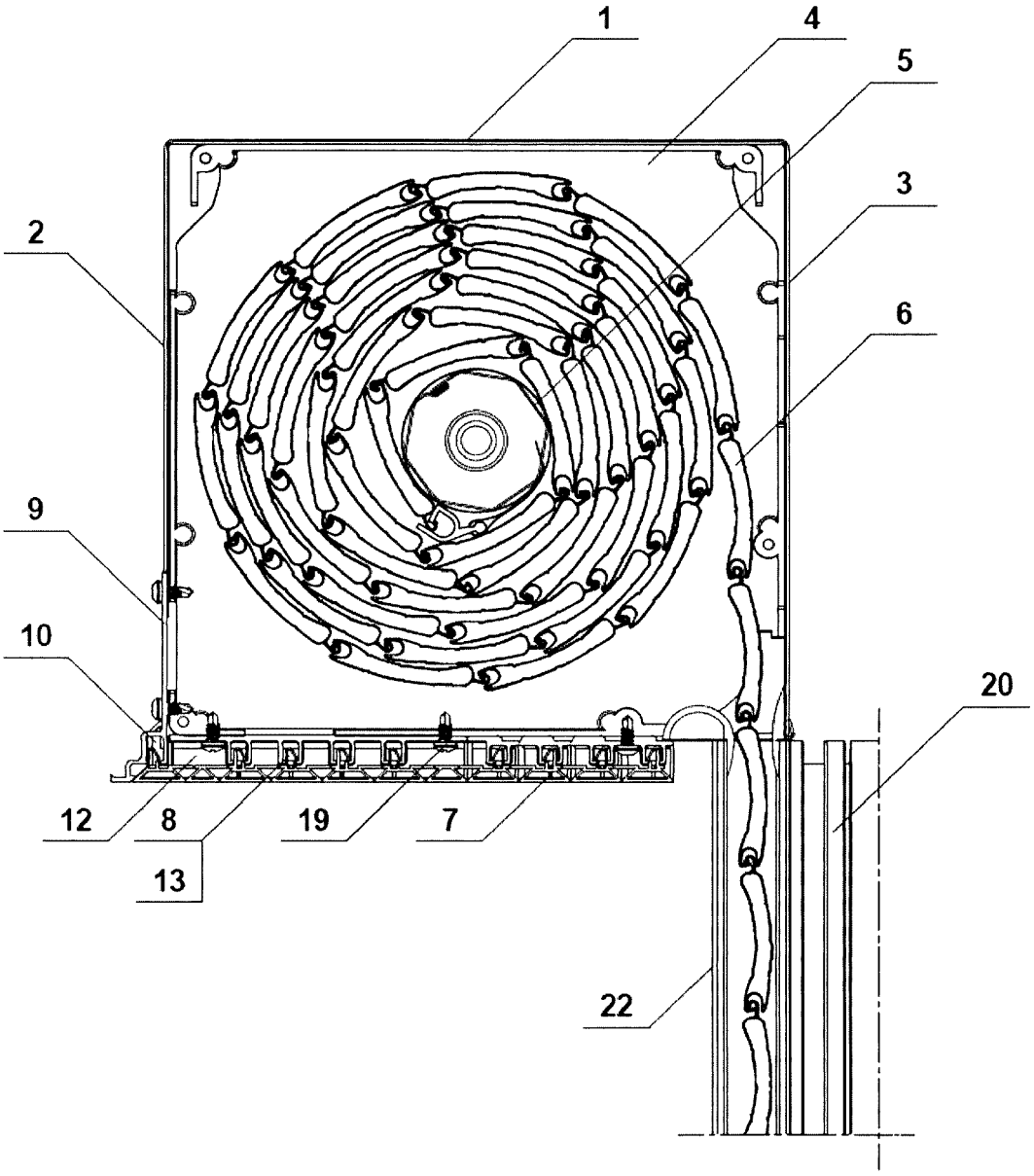

Fig. 1

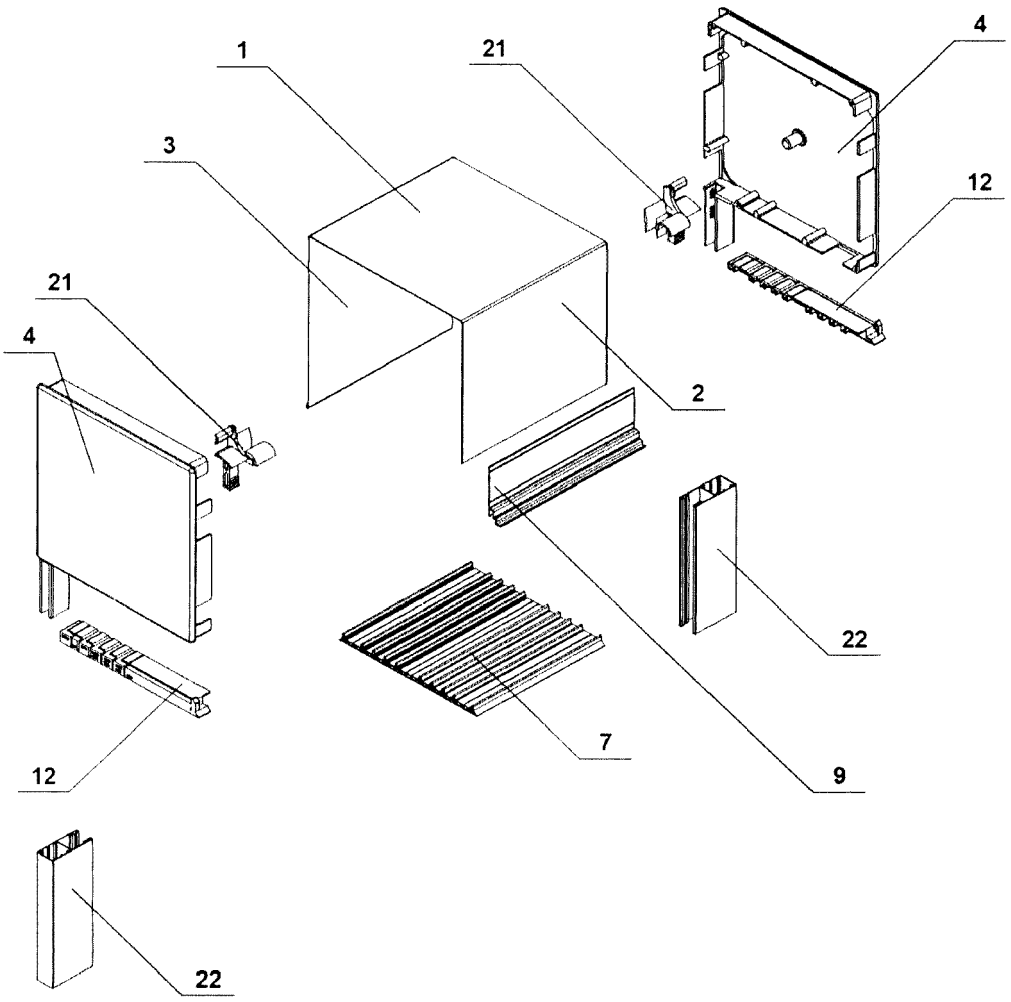

Fig. 2

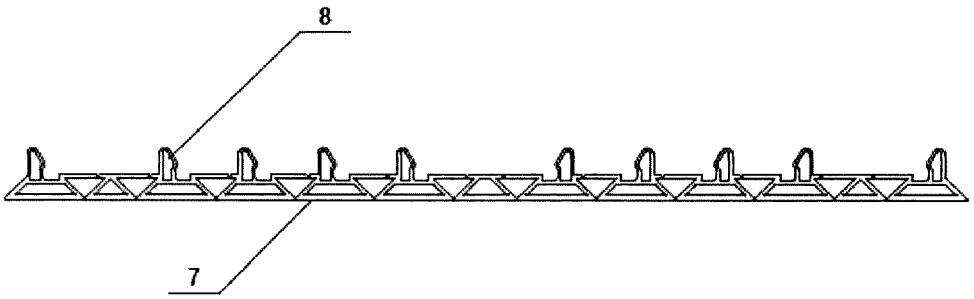

Fig. 3

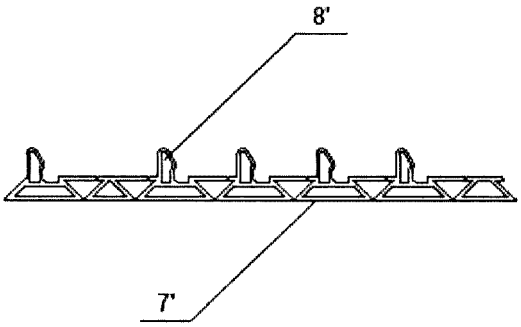

Fig. 4

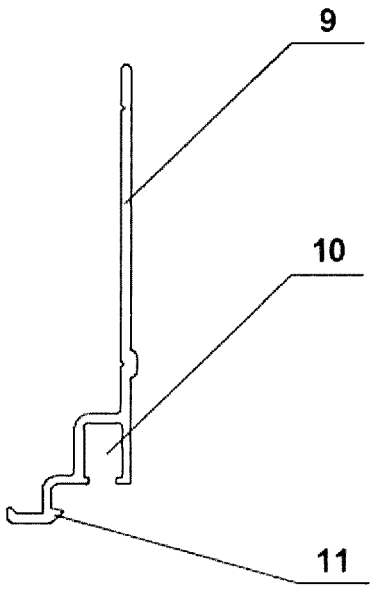

Fig. 5

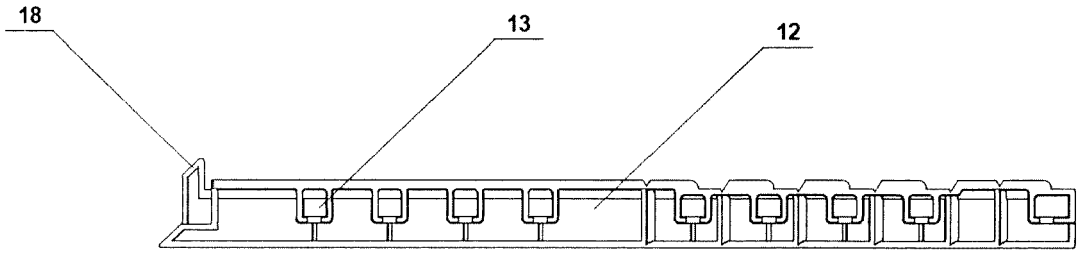

Fig. 6

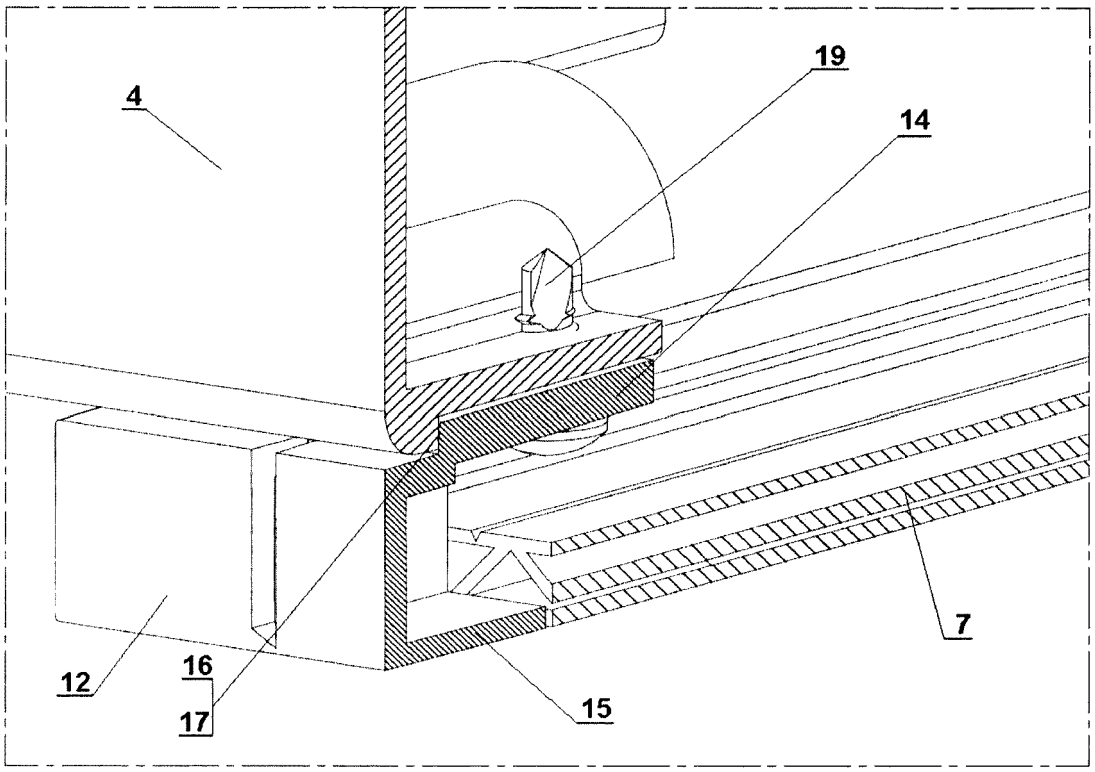

Fig. 7

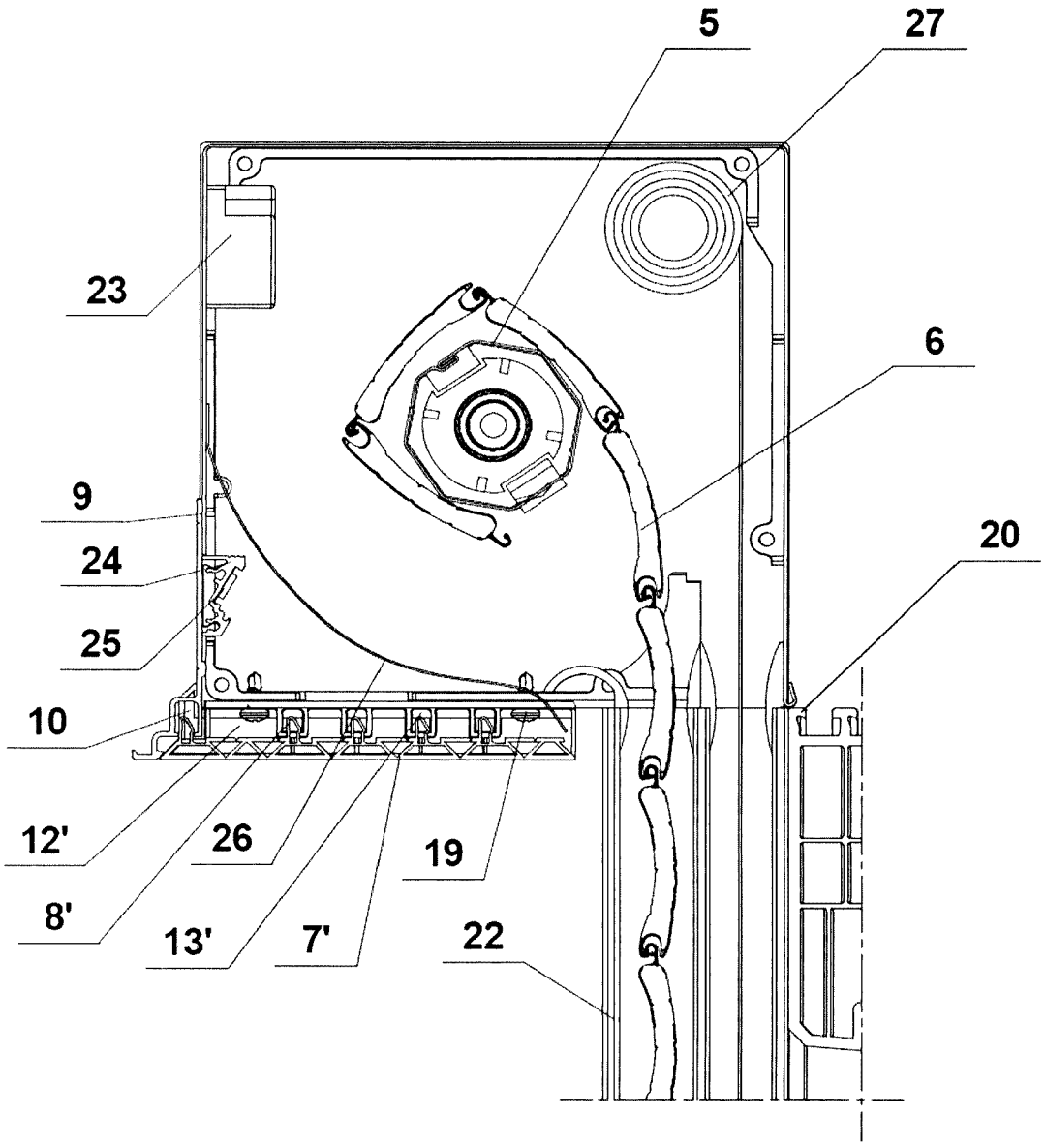

Fig. 8

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EUROPEAN SEARCH REPORT

Application Number
EP 19 46 0005

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 200 21 804 U1 (FENSTERZARGEN & STUROKA WERK G [DE]) 29 March 2001 (2001-03-29) * paragraphs [0051] - [0059]; figures 1-2 *	1-5	INV. E06B9/17 F21V33/00
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TECHNICAL FIELDS SEARCHED (IPC)
E06B
F21V
F21Y

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	5 June 2019	Kofoed, Peter

CATEGORY OF CITED DOCUMENTS

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05-06-2019

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