



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
12.09.2018 Bulletin 2018/37

(51) Int Cl.:
E06B 9/174 ^(2006.01) **E06B 9/50** ^(2006.01)

(21) Application number: **18160109.7**

(22) Date of filing: **06.03.2018**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

- **VERFAILLIE, Koen**
8800 RUMBEKE (BE)
- **MAERTENS, Jonas Willem**
9000 GENT (BE)
- **VANHOUTTE, Steven Rita André**
8540 Deerlijk (BE)
- **SOLOMANIUCK, Maxim Gustave**
9000 GENT (BE)

(30) Priority: **07.03.2017 BE 201705139**

(71) Applicant: **Renson Sunprotection Screens NV**
8790 Waregem (BE)

(72) Inventors:
• **MEINSTER, John Peter**
9050 GENTBRUGGE (BE)

(74) Representative: **Hostens, Veerle et al**
KOB NV
Patents
President Kennedypark 31 C
8500 Kortrijk (BE)

(54) **ROLLER SCREEN**

(57) Screen device, comprising a screen roller which is rotatable on an axle with a screen, which can be rolled up onto and unrolled from the former, and a support element (1) on its end side for fastening a fastening body (2) in an interior space, via a fitting movement perpendicular to the axle, and comprising further guide elements (3, 4) on the fastening body (2) for guiding the fitting movement, at least one securing element (5) which is provided so as to be movable between a first position and a second position for securing the support element (1), one or more spring-mounted elements (8) which force the securing element (5) to its first position, wherein the securing element (5) comprises a rigid base body (6) which comprises a projecting rigid fitting element (7) and/or a fitting space and wherein a guide element (3) comprises a corresponding fitting space (9) and/or a corresponding projecting rigid fitting element.

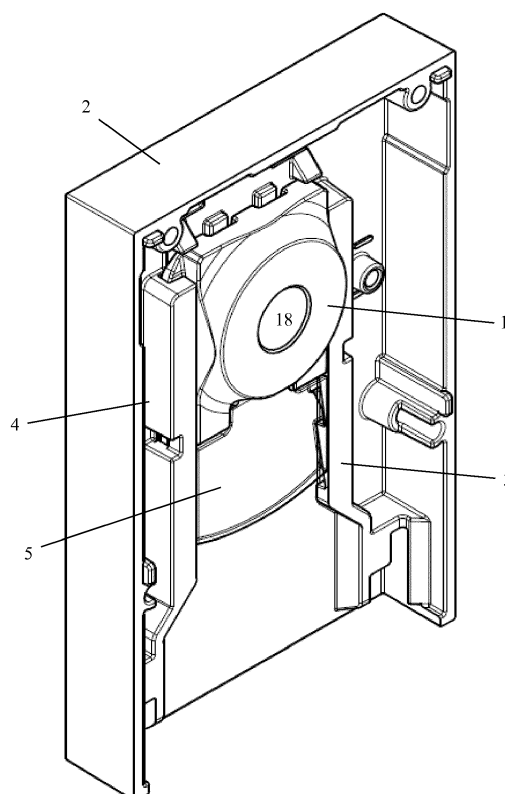


Fig. 1

Description

[0001] The present invention relates to a screen device, comprising:

- a screen roller which is rotatable about an axle;
- a screen which can be rolled up onto and unrolled from this screen roller;
- an interior space in which the screen roller is fittable in order to accommodate the latter in an installed position of the screen device;
- a support element on an end side of the screen roller for fastening the screen roller in the interior space;
- a fastening body which partly delimits the interior space, to which the support element is attachable via a fitting movement virtually perpendicular to the axle of the screen roller;
- a first guide element and a second guide element on the fastening body, which are arranged substantially parallel to each other, between which the support element is retractable and extendable in order to guide the support element during the fitting movement;
- at least one securing element for securing the support element during the fitting movement, wherein this securing element is provided on the support element so as to be movable between a first position and a second position;
- one or more spring-mounted elements which force the securing element to its first position;

wherein the securing element is arranged in such a manner that it is first moved to its second position counter to the spring force of the one or more spring-mounted elements while fastening the support element during the fitting movement, wherein the support element is slidable into and out of the guide elements and is then returned to its first position on account of this spring force, wherein the securing element prevents the support element from sliding out of the guide elements.

[0002] Such screen devices are usually placed near door or window openings, wherein these are placed in such a manner with respect to this door or window opening that the screen can at least partly screen this door or window opening against, for example, sunlight and/or insects and/or cold or heat. Such a screen device may also be used as an unrollable wall or roof element which usually serves as a screen against, for example, sunlight and/or insects and/or cold or heat.

[0003] Screen rollers are typically fitted in an interior space via a movement which is virtually perpendicular to the axle of the screen roller, in which interior space they are to be fastened in a secure manner between fastening bodies, with access to this interior space being provided on one side. Typically, only limited space is available for fitting the screen roller in this interior space in a secure manner. At least this interior space will be screened off by said fastening body and a fastening body on the other

side of the screen roller. Typically, only said side via which the screen roller can be fitted in the interior space will be left clear, with the interior space being screened off on all other sides. Access to the interior space is typically determined by environmental factors, such as the presence of a roof or a wall, etc.

[0004] Such screen devices comprising said securing element are described, for example, in EP 2 813 662. The embodiment illustrated here is suitable for relatively heavy screen rollers, but takes up a lot of space and cannot easily be made more compact. EP 2 813 662 also describes embodiments in which a part of the support element itself is elastic and is consequently elastically movable with respect to the remainder of the support element. This elastic part thus forms a said spring-mounted element. In the installed position, this elastic part can, in the first position, engage in a recess of the fastening body. This elastic part thus also forms a said securing element. Such a securing arrangement using elastic parts can be made more compact. Even when provided with a said preferred support along virtually the entire distance between the guide elements, such a securing arrangement using elastic parts is in practice only suitable for relatively lightweight screen roller applications. The reason for this is that the elastic parts are weak points in such a securing arrangement. When they break, the securing action is lost and the screen roller comes loose. With relatively heavy screen rollers, the risk of the elastic parts breaking is obviously greater and the risks resulting from such a screen roller coming loose are also significantly greater.

[0005] It is an object of the present invention to provide such a screen device in which the securing action can be ensured in a relatively compact way, even with relatively heavy screen rollers.

[0006] This object of the invention is achieved by providing a screen device, comprising:

- a screen roller which is rotatable about an axle;
- a screen which can be rolled up onto and unrolled from this screen roller;
- an interior space in which the screen roller is fittable in order to accommodate the latter in an installed position of the screen device;
- a support element on an end side of the screen roller for fastening the screen roller in the interior space;
- a fastening body which partly delimits the interior space, to which the support element is attachable via a fitting movement virtually perpendicular to the axle of the screen roller;
- a first guide element and a second guide element on the fastening body, which are arranged substantially parallel to each other, between which the support element is retractable and extendable in order to guide the support element during the fitting movement;
- at least one securing element for securing the support element during the fitting movement, wherein

this securing element is provided on the support element so as to be movable between a first position and a second position;

- one or more spring-mounted elements which force the securing element to its first position;

wherein the securing element is arranged in such a manner that it is first moved to its second position counter to the spring force of the one or more spring-mounted elements while fastening the support element during the fitting movement, wherein the support element is slidable into and out of the guide elements and is then returned to its first position on account of this spring force, wherein the securing element prevents the support element from sliding out of the guide elements, wherein the securing element comprises a rigid base body which comprises a projecting rigid fitting element and/or a fitting space and wherein the first guide element or the fastening body comprises a corresponding fitting space and/or a corresponding projecting rigid fitting element, so that, in the installed position with the securing element in its first position, each projecting rigid fitting element engages in the corresponding fitting space in order to secure the support element.

[0007] Such rigid projecting fitting elements are able to deal with larger weights than elastic parts. By making a base body of the securing element rigid and uncoupling the spring-mounted elements from the location of the securing arrangement itself and now forming this securing arrangement by means of such a rigid projecting fitting element which engages in a corresponding fitting space, it is ensured that a more secure securing arrangement is produced. Even when the spring force of the spring-mounted elements decreases or the spring-mounted elements fail, such a projecting rigid fitting element will continue to engage in the corresponding fitting space in the installed position and continue to ensure the securing action, unless it is actively removed from this fitting space.

[0008] The support element is in this case preferably provided with said securing element. In this case, the securing element may then form part of the support element or may be fastened to the support element as a separate part in order to fit this securing element on the support element.

[0009] In addition, the first guide element or the fastening body preferably comprises at least one second fitting space which is configured to correspond with the projecting rigid fitting element of the securing element and/or comprises at least one second projecting rigid fitting element which is configured to correspond with the fitting space of the securing element.

[0010] In this way, the support element can be fastened to the fastening body in several steps. This is particularly advantageous in cases where, in addition to the mechanical coupling, an electrical coupling is also produced while the support element is being fastened to the base body. Such an electrical coupling is typically provided where a tube motor is fitted in the screen roller for driving the

rotating movement of this screen roller in order to roll up and unroll the screen. Such a tube motor will typically already rotate initially when this electrical coupling is being brought about. When installing a screen roller, it is difficult to hold a screen roller up when such a sudden movement of the screen roller occurs. Due to such a second fitting space and/or a second projecting rigid fitting element, it can be ensured that the screen roller will not fall down completely but remain secured if grip is lost when such a sudden movement of the screen roller occurs. In a first step, a degree of securement is achieved by means of the second fitting space and/or the second projecting rigid fitting element. Subsequently, in a second step, installation of the support element on the fastening body may be continued, in which case an optional electrical coupling may also be produced in addition to the mechanical coupling.

[0011] With such an embodiment, the second fitting space preferably comprises an engaging incline and/or the second projecting rigid fitting element preferably comprises an engaging incline, in which case the projecting rigid fitting element of the securing element then comprises a corresponding engaging incline and/or in which case the fitting space of the securing element then comprises a corresponding engaging incline, so that, when fastening the support element during the fitting movement, the projecting rigid fitting element of the securing element first engages in the second fitting space and/or the second projecting rigid fitting element engages in the fitting space of the securing element, after which the corresponding engaging inclines engage with each other to return the securing element to its second position, counter to the spring force, and finally, on account of the spring force, to allow the projecting rigid fitting element of the securing element to engage in the former fitting space of the first guide element or the fastening body and/or to allow the first projecting rigid fitting element to engage in the fitting space of the securing element.

[0012] Instead of providing the first guide element or the fastening body with a second fitting space and/or a second projecting rigid fitting element, it is possible, as an alternative or in addition, to provide the securing element with at least one second projecting rigid fitting element which is configured to correspond with the former fitting space of the first guide element or the fastening body and/or to provide at least one second fitting space which is configured to correspond with the former projecting rigid fitting element of the first guide element or the fastening body. Mutatis mutandis, it is then also possible to provide analogous engaging inclines as described above in connection with second fitting spaces and/or second projecting rigid fitting elements in the first guide element.

[0013] The first guide element of a screen device according to the present invention furthermore preferably delimits a guide slot and the support element preferably comprises a corresponding guide rib which engages in this guide slot during the fitting movement, in which case

each said fitting space of the first guide element or the fastening body ends in this guide slot and/or each said projecting rigid fitting element of the first guide element or the fastening body extends in this guide slot.

[0014] As an alternative or in addition, the first guide element may also be provided with a guide rib, in which case the support element is provided with a corresponding guide slot, so that this guide rib engages in this guide slot during the fitting movement. A said fitting space of the first guide element may then be provided in this guide rib and/or a said projecting rigid fitting element of the first guide element may then project with respect to this guide rib.

[0015] The securing element is preferably movable between its first position and its second position, substantially in a direction along the axle of the screen roller.

[0016] The securing element is furthermore preferably pivotably fastened to the support element. To this end, the securing element is preferably arranged so as to be pivotable about a pivot axis which extends at right angles to the axle of the screen roller and at right angles to the fitting movement. When the securing element is arranged so as to be pivotable in this way, the pivot movement may be limited in such a manner that a displacement of the securing element in accordance with this pivot movement substantially takes place in a direction along the axle of the screen roller.

[0017] Every dimension of the securing element, preferably in a direction along the axle of the screen roller, is smaller than or equal to the largest corresponding dimension of each of the guide elements. In this way, the securing arrangement can be brought about in a very compact manner, with very little space being required for this purpose between the screen roller and the fastening body, next to the screen roller.

[0018] The securing element is preferably provided with said one or more spring-mounted elements.

These one or more spring-mounted elements are then preferably arranged on the side of the base body opposite the side on which each said projecting rigid fitting element of the base body and/or each said fitting space of the base body is provided.

[0019] In a preferred embodiment, not only the first guide element comprises a fitting space and/or a projecting rigid fitting element, but also the second guide element, and the rigid base body of the securing element comprises a projecting rigid fitting element which is configured to correspond with this fitting space of the second guide element and/or a fitting space which is configured to correspond with this projecting rigid fitting element of the second guide element, so that, in the installed position, with the securing element in its first position, each projecting rigid fitting element engages in the corresponding fitting space in order to secure the support element.

In such an embodiment, the spring-mounted elements are preferably arranged between the guide elements, in the installed position of the screen device.

[0020] Above, reference was repeatedly made to the securing arrangement of the securing element with respect to the first guide element or the fastening body. It goes without saying that, analogously, it is in each case also possible to adopt improved embodiments of this securing arrangement for securing the securing element with respect to the second guide element. Preferably, with regard to transmission of forces, the securing element is constructed symmetrically here, with this securing element being secured in the same way on both sides with respect to each of the guide elements and/or the fastening body.

Up to now, reference was only made to one securing element. Alternatively, it is for example also possible to provide a separate securing element for each guide element. Preferably, however, only one securing element is provided for both guide elements and/or the fastening body.

[0021] A screen device according to the present invention furthermore comprises preferably a blocking element for fixing the securing element in the installed position of the screen device.

It is possible to provide, for example, one or more additional fastening elements as blocking element. Thus, it is for example possible to provide a screw to screw the securing element down in the installed position of the screen device.

[0022] The securing element of a screen device according to the present invention furthermore preferably comprises an engaging element for manually moving the securing element from its first position to its second position.

[0023] The present invention will now be explained in more detail by means of the following detailed description of some preferred screen devices according to the present invention. The sole aim of this description is to give illustrative examples and to indicate further advantages and features of these screen devices, and can therefore by no means be interpreted as a limitation of the area of application of the invention or of the patent rights defined in the claims.

[0024] Reference numerals are used in this detailed description to refer to the attached drawings, in which:

- Fig. 1 shows a perspective view of a fastening body and a support element with a securing element of a first embodiment of a screen device according to the present invention fastened thereto;
- Fig. 2 shows the fastening body from Fig. 1 separately in perspective;
- Fig. 3 shows the support element from Fig. 1 separately in perspective;
- Fig. 4 shows the securing element from Fig. 1 separately in perspective;
- Fig. 5 shows the support element from Fig. 1 together with the securing element from Fig. 1 fastened thereto in perspective;
- Fig. 6 shows a fastening body and a support element

with a securing element of a second embodiment of a screen device according to the present invention fastened thereto in perspective;

- Fig. 7 shows the fastening body from Fig. 6 separately in perspective;
- Fig. 8 shows the support element from Fig. 6 separately in perspective;
- Fig. 9 shows the securing element from Fig. 6 separately in perspective.

[0025] This detailed description will only discuss the installation of a screen roller in which the screen roller is installed counter to the force of gravity. This is also referred to as vertical installation. Of course, the present invention is not limited to this vertical installation.

[0026] A screen device according to the invention comprises a screen roller (not shown) which is rotatable about an axle. A screen (not shown) which can be rolled up and unrolled is arranged on this screen roller. The screen roller has to be installed in an interior space which may be situated, for example, above a window or door opening. Often, this interior space is only accessible from the bottom side, as a result of which vertical installation in an upward direction is desirable.

[0027] In order to be able to install the screen roller in the interior space in a simple manner, the screen device comprises a support element (1). In the illustrated embodiments, this support element (1) comprises an axle opening (18) in which the axle can be mounted in order to fit the screen roller so as to be rotatable about this axle. In this way, this support element (1) is provided on the end side of this screen roller.

[0028] The screen device furthermore comprises a fastening body (2) which partly delimits the interior space and to which the support element (1) is attachable. The support element (1) is attachable to the fastening body (2), virtually perpendicularly to the axle of the screen roller, via a fitting movement.

Of both illustrated embodiments, in each case one support element (1) and one fastening body (2) are illustrated. Preferably, such a screen device comprises such a support element (1) and such a fastening body (2) at each end of the screen roller, with the screen roller being rotatably mounted in both support elements (1).

The interior space in which the screen roller is accommodated may be delimited, for example, by a screen casing of which the fastening bodies (2) form part.

[0029] The illustrated fastening bodies (2) in each case comprise two guide elements (3, 4) which are arranged substantially parallel to each other and between which the corresponding support element (1) is retractable and extendable for guiding the support element (1) during the fitting movement for installing the support element (1) on the corresponding fastening body (2).

In this case, the guide elements (3, 4) are arranged separate from each other. They could equally form part of, for example, the same U-shaped bracket. These guide elements (3, 4) may form an integral part of the fastening

body (2) or may be installed on this fastening body (2). Each guide element (3, 4) is provided with a guide slot (11) in which in each case a corresponding guide rib (12) of the support element (1) is guided during the fitting movement for fitting the support element (1) to the fastening body (2).

[0030] In addition to said support element (1) and said fastening body (2), a screen device according to the present invention also comprises a securing element (5) in order to secure the support element (1) during the fitting movement. In the illustrated embodiments, this securing element (5) is fastened at the bottom of the support element (1).

This securing element (5) is in each case arranged on the support element (1) so as to be movable between a first position and a second position and comprises a rigid base body (6) on which rigid fitting elements (7) are provided which project on the sides of the guide slots (11). In the guide slots (11) themselves, corresponding fitting spaces (9) are provided, in which, in the installed position, the corresponding fitting elements (7) engage in order to secure the support element (1), as can be seen in Figs. 1 and 6.

By engaging at the bottom of the rigid base body (6) of the securing element (5), the securing element (5) can manually be moved from its first position to its second position and vice versa. To this end, the bottom part (16) of the rigid base body (6) always remains accessible in every position of the screen on the screen roller. In this way, a screen roller installed in the interior space can easily be removed again by manually moving the securing element (5) to its second position and sliding the support element (1) out of the guide elements (3, 4).

[0031] In the first embodiment, the securing element (5) is pivotably fastened at the bottom of the support element (1). To this end, it is fixed in the support element (1) with pivoting pins (17), so that the securing element (5) is pivotable about a pivot axis which extends at right angles to the axle of the screen roller and at right angles to the fitting movement.

Between the fitting elements (7), the securing element (5) is provided with two spring-mounted legs (8) which drive the securing element (5) to its first position during the fitting movement. These spring-mounted legs (8) may be configured as an integral part of the securing element (5) or may be fitted thereto.

The spring-mounted legs (8) are arranged facing the fastening body (2) and are configured to drive the securing element (5) away from this fastening body (2) to its first position. In the direction towards the fastening body (2), the fitting spaces (9) in the guide elements (3, 4) end in the guide slots (11) in order to allow the fitting elements (7) to engage therein in the first position of the securing element (5).

[0032] When fitting the support element (1) with its guide ribs (12) in the guide slots (11), the securing element (5) will first be pushed to its second position by the guide elements (3, 4), counter to the spring force of the

spring-mounted legs (8), during the fitting movement. In this embodiment, second fitting spaces (10) are provided in the guide elements (3, 4), under said fitting spaces (9), which second fitting spaces (10) likewise end in the guide slots (11), in the direction facing the fastening body (2). On account of the spring force of the spring-mounted legs (8), the securing element (5) first returns to its first position at the location of these second fitting spaces (10), with the projecting rigid fitting elements (7) engaging in these fitting spaces (10). The fitting elements (7) are provided with an engaging incline (15) and the second fitting spaces (10) are provided with a corresponding engaging incline (14). When the support element (1) is moved further between the guide elements (3, 4), these engaging inclines (14, 15) will engage with one another and the securing element (5) is forced to its second position, again counter to the spring force of the spring-mounted legs (8). Then, the securing element (5) returns to its first position at the location of the former fitting spaces (9) in the guide elements (3, 4), with the projecting rigid fitting elements (7) of the securing element (5) now engaging in these top fitting spaces (9).

As can be seen in Fig. 1, every dimension of the securing element (5) of this embodiment is smaller than or equal to the largest corresponding dimension of each of the guide elements (3, 4) in a direction along the axle of the screen roller. During the fitting movement, the securing element (5) only moves virtually in a direction along the axle of the screen roller, closer to the fastening body (2) to its second position and again further from the fastening body (2) to its first position, in which case it does not project with respect to the guide elements (3, 4). In this way, this securing element (5) is of a very compact design and does not come into contact with the screen roller of the screen, neither in the installed position, nor during the installation operation.

[0033] In the second illustrated embodiment, the securing element (5) is coupled to the support element (1) by means of spring-mounted elements (8), wherein this is movable from its first position to its second position, away from the fastening body (2). In this embodiment, the fitting spaces (9) end in the guide elements (3, 4), away from the fastening body (2), to allow the projecting rigid fitting elements (7) to engage in the first position in these fitting spaces (9).

In this embodiment, the screen device also comprises a blocking screw (13) in order to fix the securing element (5) in the installed position of the screen device, as can be seen in Fig. 6.

Claims

1. Screen device, comprising

- a screen roller which is rotatable about an axle;
- a screen which can be rolled up onto and unrolled from this screen roller;

- an interior space in which the screen roller is fittable in order to accommodate the latter in an installed position of the screen device;
- a support element (1) on an end side of the screen roller for fastening the screen roller in the interior space;
- a fastening body (2) which partly delimits the interior space, to which the support element (1) is attachable via a fitting movement virtually perpendicular to the axle of the screen roller;
- a first guide element (3) and a second guide element (4) on the fastening body (2), which are arranged substantially parallel to each other, between which the support element (1) is retractable and extendable in order to guide the support element (1) during the fitting movement;
- at least one securing element (5) for securing the support element (1) during the fitting movement, wherein this securing element (5) is provided on the support element (1) so as to be movable between a first position and a second position;
- one or more spring-mounted elements (8) which force the securing element (5) to its first position;

wherein the securing element (5) is arranged in such a manner that it is first moved to its second position counter to the spring force of the one or more spring-mounted elements while fastening the support element (1) during the fitting movement, wherein the support element (1) is slidable into and out of the guide elements (3, 4) and is then returned to its first position on account of this spring force, wherein the securing element (5) prevents the support element (1) from sliding out of the guide elements (3, 4);

characterized in that the securing element (5) comprises a rigid base body (6) which comprises a projecting rigid fitting element (7) and/or a fitting space and **in that** the first guide element (3) or the fastening body (2) comprises a corresponding fitting space (9) and/or a corresponding projecting rigid fitting element, so that, in the installed position with the securing element (5) in its first position, each projecting rigid fitting element (7) engages in the corresponding fitting space (9) in order to secure the support element (1).

- 2. Screen device according to Claim 1, characterized in that** the first guide element (3) or the fastening body (2) comprises at least one second fitting space (10) which is configured to correspond with the projecting rigid fitting element (7) of the securing element (5) and/or comprises at least one second projecting rigid fitting element which is configured to correspond with the fitting space of the securing element.

3. Screen device according to claim 2, **characterized in that** the second fitting space (10) comprises an engaging incline (14) and/or **in that** the second projecting rigid fitting element comprises an engaging incline and **in that** the projecting rigid fitting element (7) of the securing element (5) comprises a corresponding engaging incline (15) and/or **in that** the fitting space of the securing element comprises a corresponding engaging incline, so that, when fastening the support element (1) during the fitting movement, the projecting rigid fitting element (7) of the securing element (5) first engages in the second fitting space (10) and/or the second projecting rigid fitting element engages in the fitting space of the securing element, after which the corresponding engaging inclines (14, 15) engage with each other to return the securing element (5) to its second position, counter to the spring force, and finally, on account of the spring force, to allow the projecting rigid fitting element (7) of the securing element (5) to engage in the former fitting space (9) of the first guide element (3) or the fastening body (2) and/or to allow the former projecting rigid fitting element of the first guide element (3) to engage in the fitting space of the securing element (5). 5 10 15 20 25
4. Screen device according to one of the preceding claims, **characterized in that** the securing element (5) comprises at least one second projecting rigid fitting element which is configured to correspond with the former fitting space (9) of the first guide element (3) or the fastening body (2) and/or comprises at least one second fitting space which is configured to correspond with the former projecting rigid fitting element of the first guide element (3) or the fastening body (2). 30 35
5. Screen device according to one of the preceding claims, **characterized in that** the first guide element (3) delimits a guide slot (11), and **in that** the support element (1) comprises a corresponding guide rib (12) which engages in this guide slot (11) during the fitting movement, in which case each said fitting space (9, 10) of the first guide element (3) or the fastening body (2) ends in this guide slot (11) and/or each said projecting rigid fitting element of the first guide element (3) or the fastening body (2) extends in this guide slot (11). 40 45
6. Screen device according to one of the preceding claims, **characterized in that** the securing element (5) is movable between its first position and its second position, substantially in a direction along the axle of the screen roller. 50 55
7. Screen device according to one of the preceding claims, **characterized in that** the securing element (5) is pivotally fastened to the support element (1).
8. Screen device according to Claim 7, **characterized in that** the securing element (5) is pivotable about a pivot axis which extends at right angles to the axle of the screen roller and at right angles to the fitting movement.
9. Screen device according to one of the preceding claims, **characterized in that** every dimension of the securing element (5), in a direction along the axle of the screen roller, is smaller than or equal to the largest corresponding dimension of each of the guide elements (3, 4).
10. Screen device according to one of the preceding claims, **characterized in that** the securing element (5) is provided with said one or more spring-mounted elements (8).
11. Screen device according to Claim 10, **characterized in that** the one or more spring-mounted elements (8) are arranged on the side of the base body (6) opposite the side on which each said projecting rigid fitting element (7) of the base body (6) and/or each said fitting space of the base body (6) is provided.
12. Screen device according to one of the preceding claims, **characterized in that** the second guide element (4) comprises a fitting space (9) and/or a projecting rigid fitting element, and **in that** the rigid base body (6) of the securing element (5) comprises a projecting rigid fitting element (7) which is configured to correspond with this fitting space (9) of the second guide element (4) and/or comprises a fitting space which is configured to correspond with this projecting rigid fitting element of the second guide element, so that, in the installed position, with the securing element (5) in its first position, each projecting rigid fitting element (7) engages in the corresponding fitting space (9) in order to secure the support element (1).
13. Screen device according to Claim 12, **characterized in that**, in the installed position of the screen device, the spring-mounted elements (8) are arranged between the guide elements (3, 4).
14. Screen device according to one of the preceding claims, **characterized in that** this screen device comprises a blocking element (13) for fixing the securing element (5) in the installed position of the screen device.

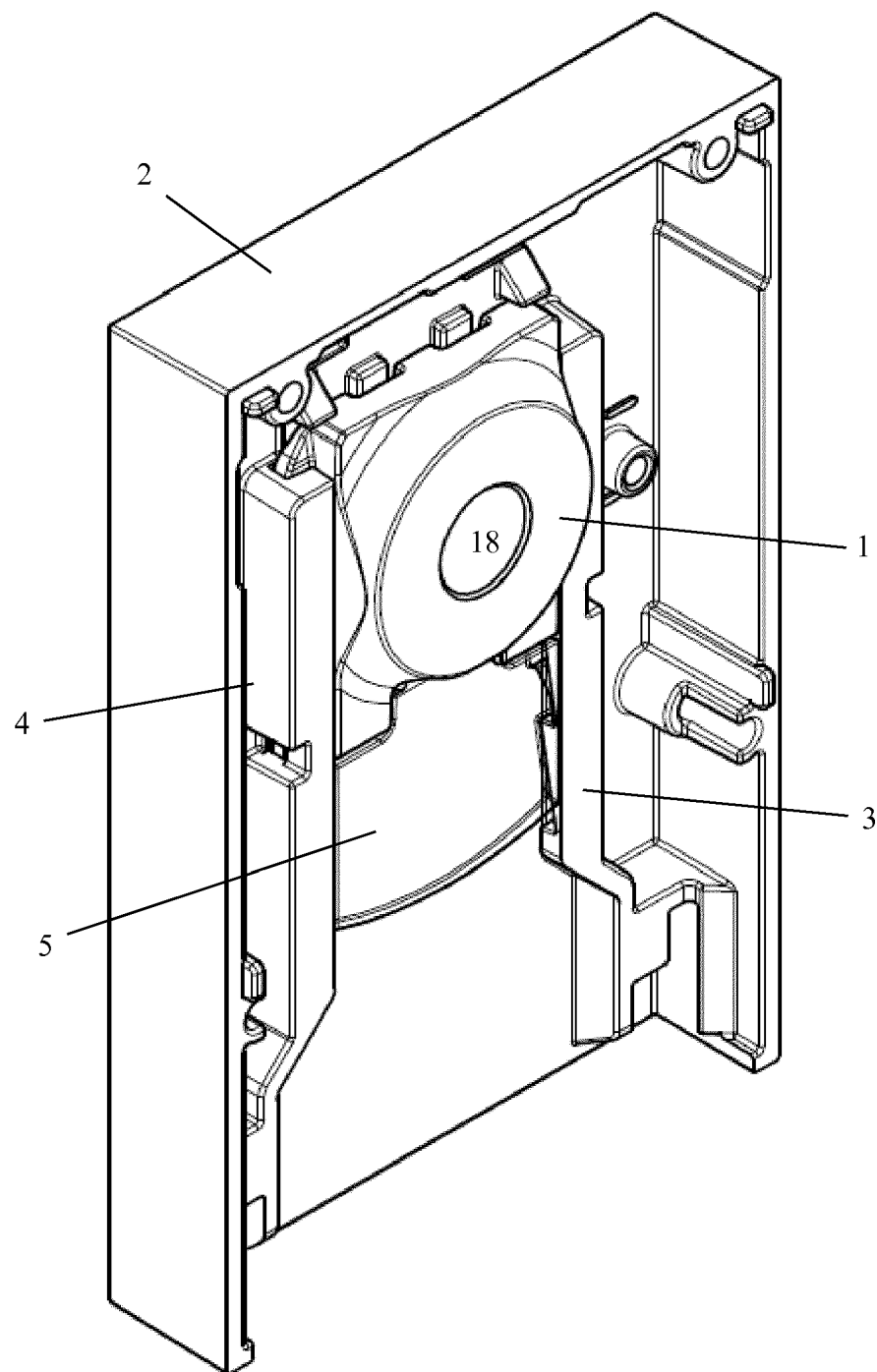
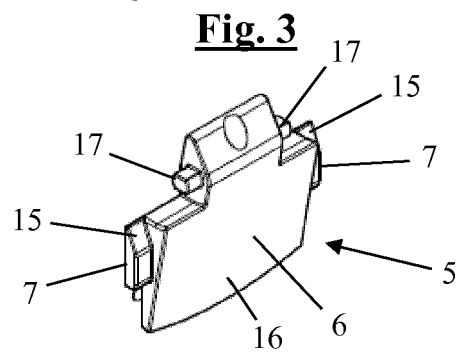
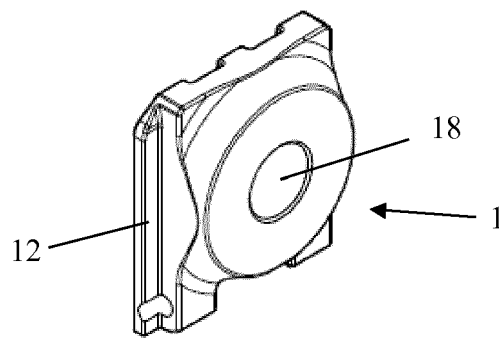
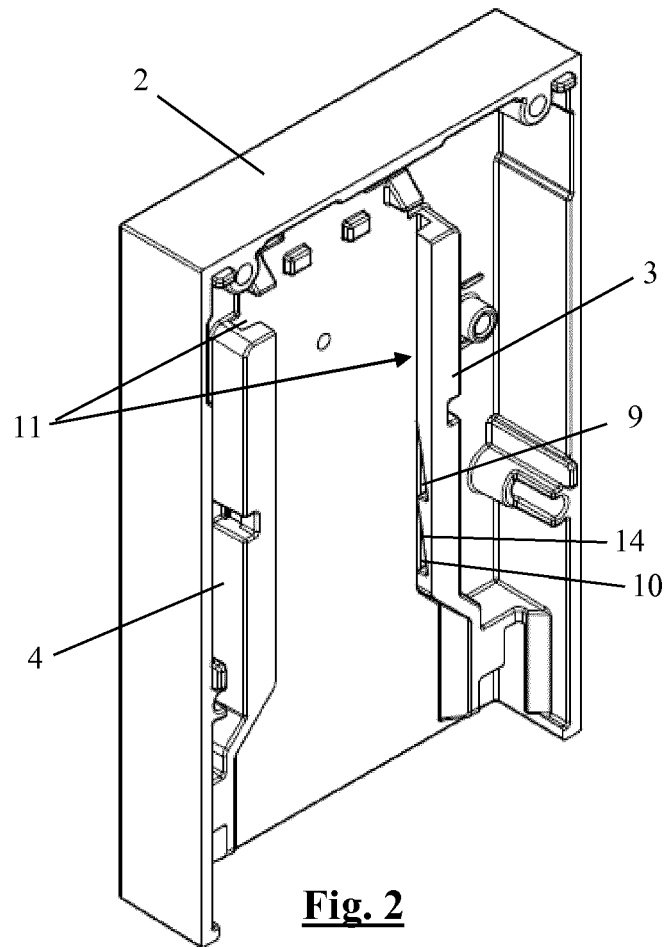


Fig. 1



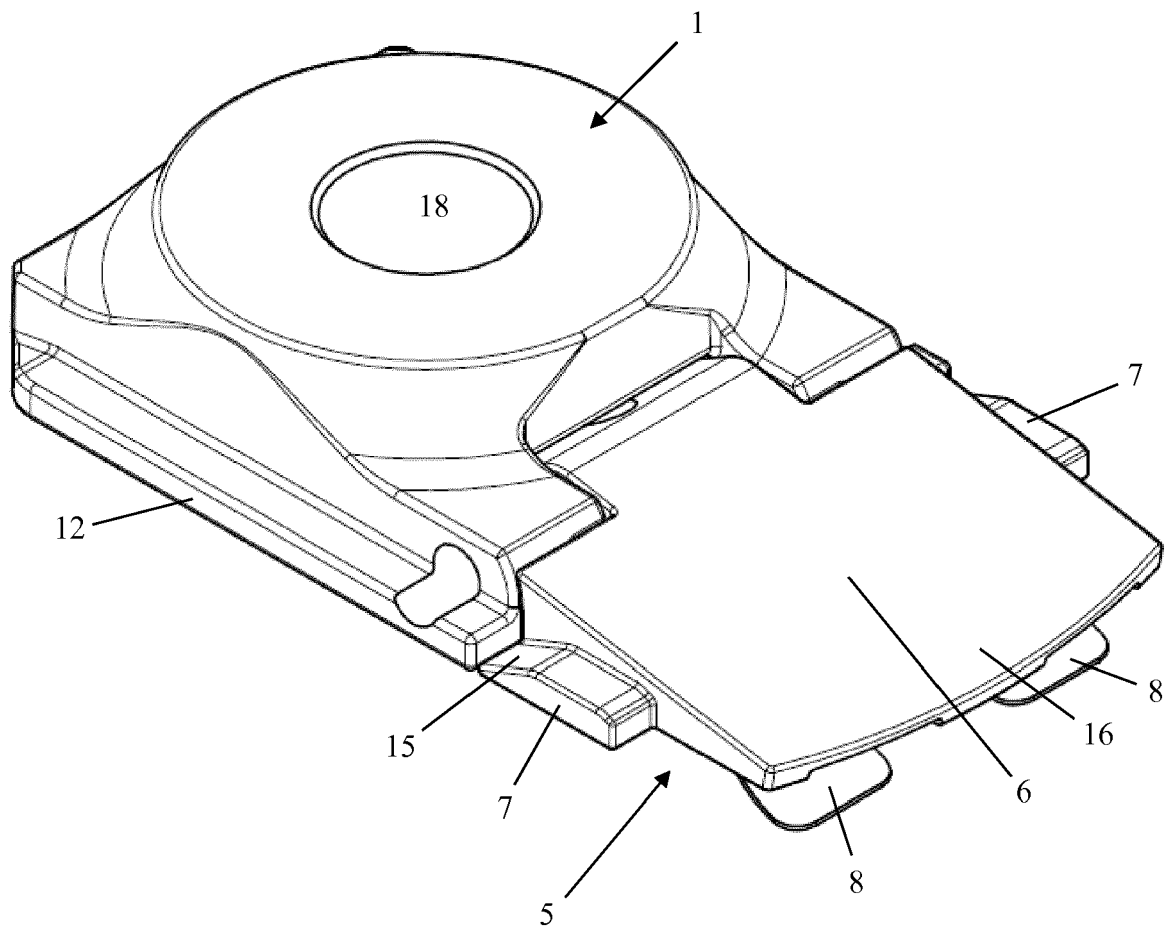


Fig. 5

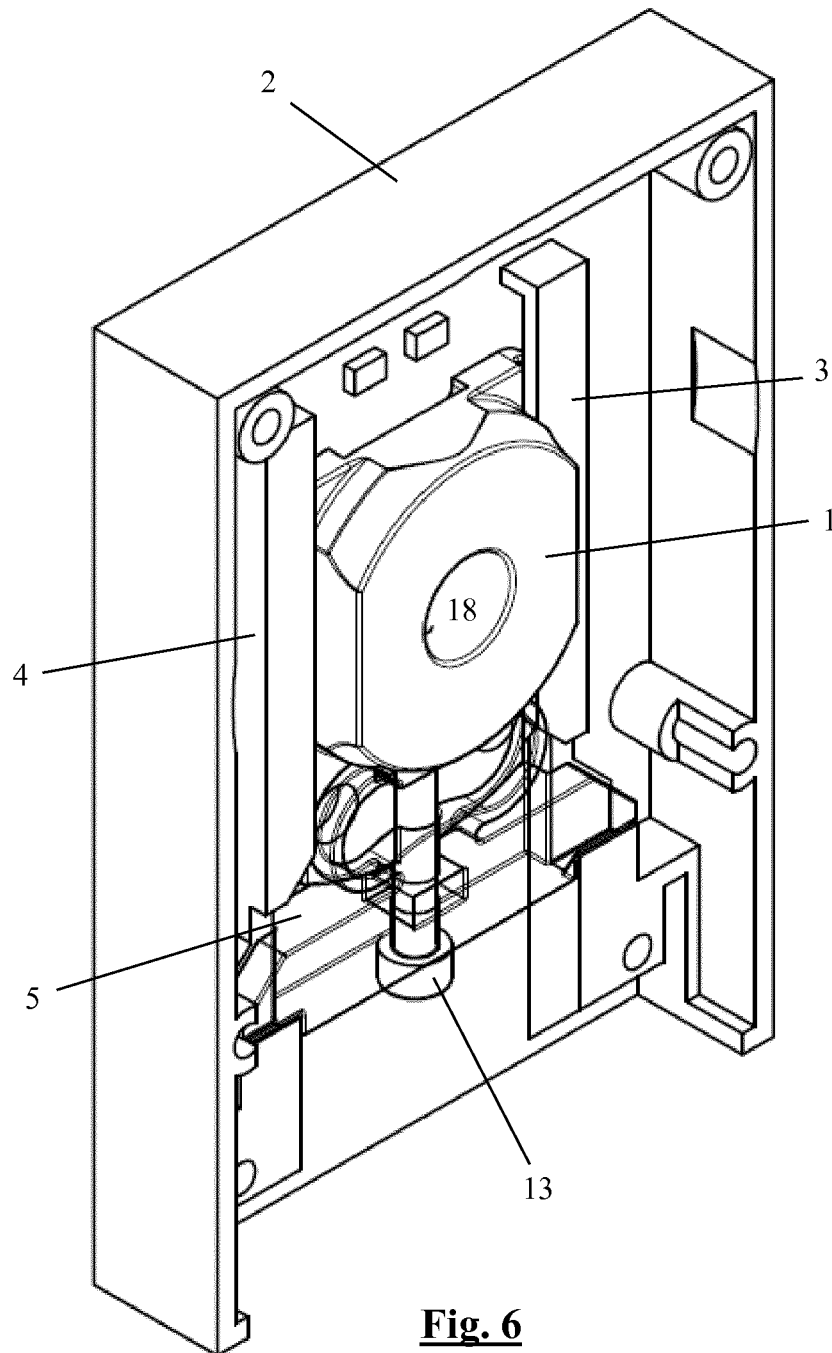
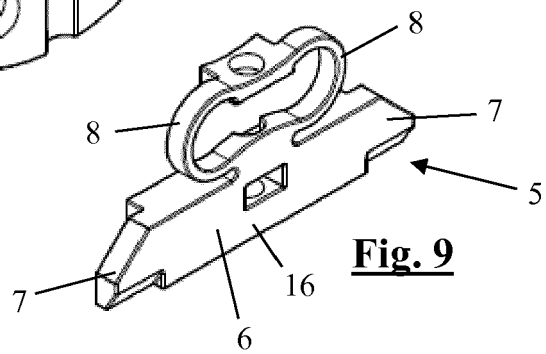
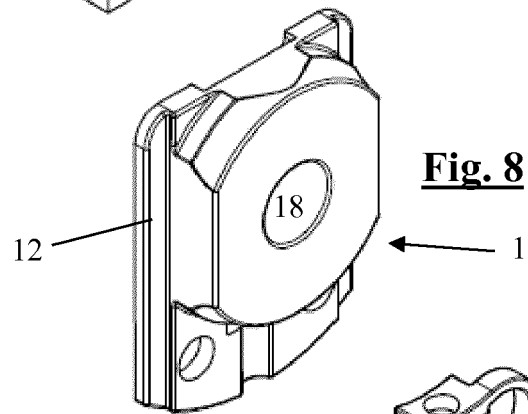
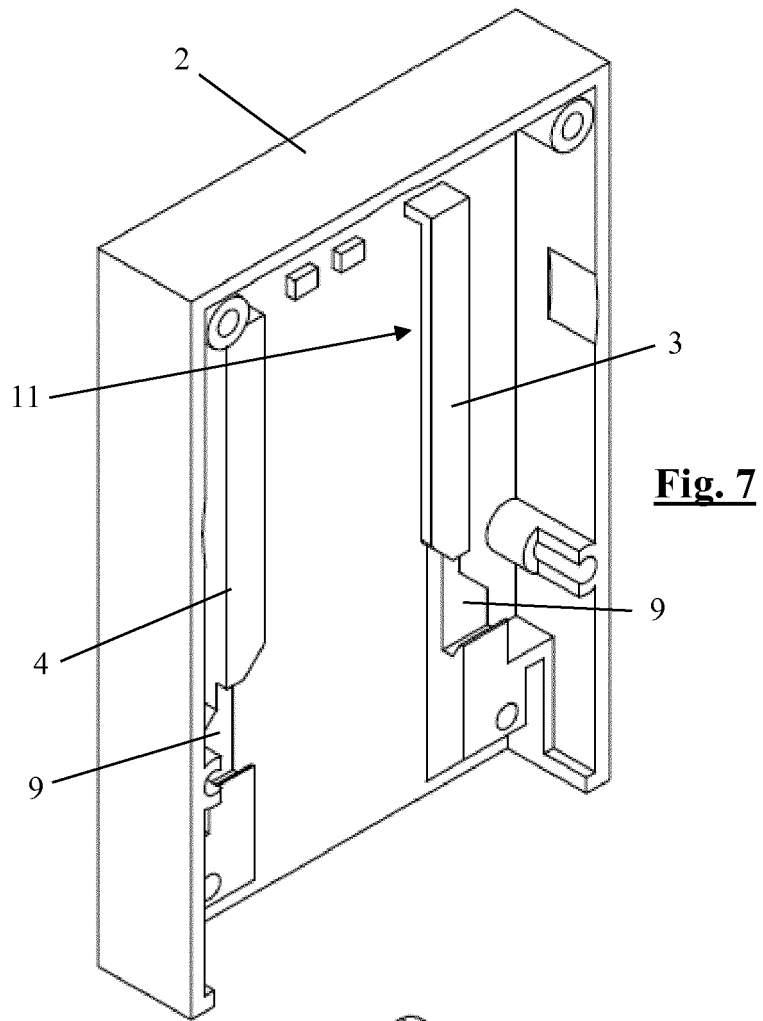


Fig. 6





EUROPEAN SEARCH REPORT

Application Number
EP 18 16 0109

5

10

15

20

25

30

35

40

45

50

55

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,D	EP 2 813 662 A2 (RENSON SUNPROT SCREENS NV [BE]) 17 December 2014 (2014-12-17) * abstract; figures 1-5 *	1-14	INV. E06B9/174 E06B9/50
A	US 2010/181031 A1 (CANNAVERDE JOSEPH [US]) 22 July 2010 (2010-07-22) * paragraph [0029] - paragraph [0030]; figures 1,2,2a *	1-14	
			TECHNICAL FIELDS SEARCHED (IPC)
			E06B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 17 July 2018	Examiner Tänzler, Ansgar
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	

EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 18 16 0109

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-07-2018

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 2813662 A2	17-12-2014	BE 1020807 A3 EP 2813662 A2	06-05-2014 17-12-2014

US 2010181031 A1	22-07-2010	AU 2009200489 A1 BR PI1005143 A2 CA 2749165 A1 EP 2379831 A2 US 2010181031 A1 US 2012132376 A1 WO 2010090786 A2	05-08-2010 20-02-2018 12-08-2010 26-10-2011 22-07-2010 31-05-2012 12-08-2010

15

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- EP 2813662 A [0004]