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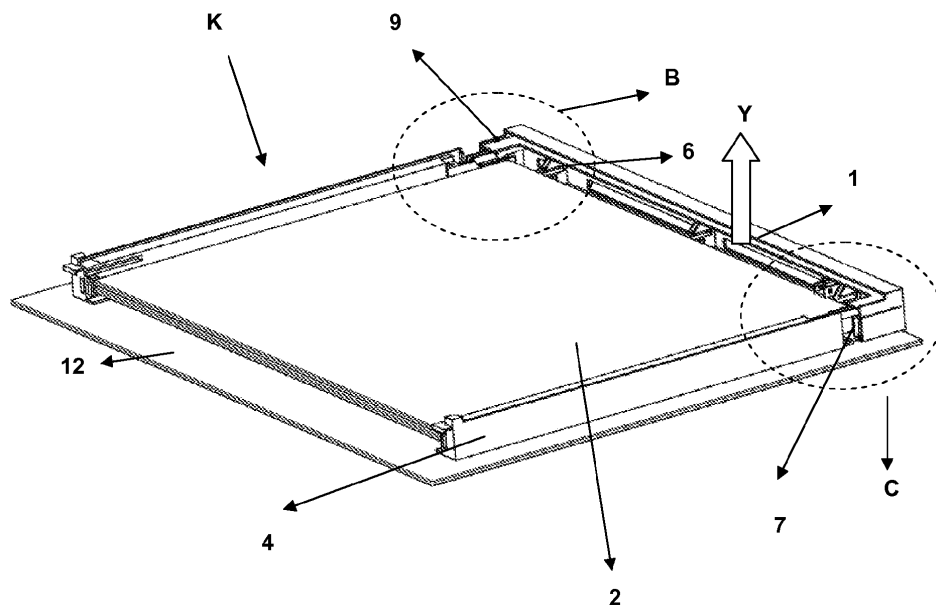
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(54) **Cooking device door**

(57) A cooking device door (K) has been developed with the present invention, which is composed of detachable plates (2, 12). The cooking device door (K) comprising at least one front plate (12), at least one inner plate (2), fitted to at least one slot (3) disposed on at least one body (4) provided on the side of said plate (12) facing the interior of the cooking device, and at least one movable upper profile (1), fixing the inner plate (2) to the front

plate (12), further comprises at least one profile extension (9) extending toward the body (4) on at least one end of the upper profile (1), at least one channel (8), provided on the side of the front plate (12) facing the interior of the cooking device, and in which (8) said profile extension (9) is slid so that the upper profile (1) is moved in direction of X-X', and at least one support element (6), disposed on the upper profile (1), and into which said plate (2) is fitted.



**Figure 5**

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**Description****Technical Field of Invention**

[0001] The present invention relates to cooking devices comprising attachable/detachable plates on the doors thereof.

**Prior Art**

[0002] Cooking device doors are generally composed of a front plate and other plates fitted to this plate. These plates are made of heat-resistant transparent materials to make the device interior visible. Put differently, making suchlike plates from transparent materials enables user to see the state of a food cooked in the device, without having to open the door of the latter.

[0003] These plates become dirty due to various reasons while foods are cooked in the device. When these plates are fixed to, i.e. not removable from, the door, it becomes difficult to clean the dirt. Thus, oven doors have been developed at which the plates can be removed and then attached back to solve this problem. In such doors developed, however, the user must dismantle some components from the door in order to remove the plates. Therefore, the difficulty in disassembling the plates and assembling them back after cleaning is inconvenient with respect to user comfort.

[0004] In the patent document FR2563612 according the prior art is disclosed an oven door with a removable front plate of glass. The oven door is composed of an internal door body made of metal frames and comprising a window. On the side of the front glass plate facing the internal body is provided resilient retaining elements. A cylindrical element to fit into said retaining elements is provided on the side of the internal body conjoining with the front glass plate. Additionally, an angular retaining element provided at the lower part of the front glass plate is fitted into a recessed opening disposed on the internal body. When the front glass plate is to be removed from the body, the plate is pulled so that the cylindrical element is released from the retaining elements. The front glass plate, now brought to a certain angular position as a result of pulling it with the angular retaining element provided at the lower part, is detached from the internal body. So it becomes possible to detach the front glass plate from the door body without having to dismantle any component from the door. In the method disclosed in the patent document FR2563612, however, the glass plate may be damaged due to the force exerted to pull the glass plate.

**Brief Description of Invention**

[0005] A cooking device door has been developed with the present invention, which is composed of detachable plates. Said door is composed of at least one front plate and at least one inner plate fitted to this plate. At the side of the front plate facing the interior of the cooking device

is provided at least one body where to said inner plate is fitted. The inner plate is fastened to the front plate by means of at least one upper profile and at least one slot provided on the body. At least one end of the upper plate extends towards the body. The extension of this profile is introduced into at least one channel provided on said side of the front plate. Thus, it becomes possible to move the upper profile in a sliding manner. When it is wished to remove the plates, the upper profile is pulled so that the profile extension slides in the channel and the profile becomes open. The plates are lifted upward, are thus released from their slots and removed accordingly. When it is wished to attach back the plates, they are placed into the slots and the upper profile, now open, is pushed so that it slides in the channel by means of the profile extension. In this way, the profile is closed and the plates are fixed.

**Objective of Invention**

[0006] The aim of the present invention is to develop a cooking device door composed of easily-dismountable plates.

[0007] A further aim of the present invention is to develop a cooking device door having plates that can be dismantled without having to dismantle any component from the door.

**Description of Figures**

[0008] An exemplary cooking device door and an upper profile movable in a channel according to the present invention are illustrated in annexed figures as described below;

Figure 1 is a perspective illustration of a cooking device door.

Figure 2 provides a close-up view of the detail "A" of said door given in Figure 1.

Figure 3 is a detailed illustration of an upper profile in closed position.

Figure 4 is a detailed illustration of an upper profile in open position.

Figure 5 is a perspective illustration of a door with the upper profile in open position.

Figure 6 provides a close-up view of the detail "B" of said door given in Figure 5.

Figure 7 provides a close-up view of the detail "C" of said door given in Figure 5.

Figure 8 is a perspective illustration of an exemplary channel in which said upper profile is moved.

**[0009]** All the parts illustrated in figures are individually assigned a reference numeral and the corresponding terms of these numbers are listed below.

Cooking device door	(K)
Upper profile	(1)
Inner plate	(2)
Slot	(3)
Body	(4)
Side wall	(5)
Support element	(6)
Gap	(6')
Retaining lug	(7)
Channel	(8)
Profile extension	(9)
Recess	(10)
Stopper	(11)
Front plate	(12)

### Disclosure of the Invention

**[0010]** The cooking device door (K) illustrated in Figure 1 comprises in general terms at least one front plate (12) and at least one inner plate (2). These plates (2, 12) are made of heat-resistant materials. In order to avoid the need to open the door (K) during a cooking period, these plates (2, 12) can be of transparent materials as well. At the side of the front plate (12) facing the interior of the cooking device (not illustrated in figures) are provided at least one body (4) and at least one slot (3) disposed on this body (4), as illustrated in detail in Figure 2. The inner plate (2) is fitted to the front plate (12) as a result of fitting the inner plate (2) to this slot (3) provided on the body (4). As the number of the inner plate (2) is increased, the number of slots (3) is increased also; in dependence on the number of plates (2) (the figures illustrate three inner plates (2) and correspondingly three slots (4) to fit said plates). The opposite edge of the inner plate (2) that cannot be fitted into the slot (3), and at least another edge of the plate (2) are fitted to the front plate (12) by means of at least one upper profile (1), and by means of said body (4), respectively.

**[0011]** At least one end of the upper profile (1), which is in closed position in Figure 3, extends towards the body (4). The extension (9) of this profile is introduced into at least one channel (8) provided on the side of the front plate (12) facing into the cooking device. Thus, the profile (1) can be moved on the direction of X-X' in a sliding manner. When the inner plate (2) is fitted to the slot (3), the profile (1) is slid on direction of X and the plate (2) is attached to at least one aperture (6') disposed on at least one support element (6). When the user wishes to remove the inner plate (2), he/she pulls the upper profile (1) on direction of X'. The profile extension (9) extending toward the body (4) is slid in the channel (8) and the profile (1) is brought to its open position (shown in Figure

4). The inner plate (2) detached from the aperture (6') on the support element (6) can be easily removed from the slot (3) by moving it towards the direction of Y indicated in Figure 5.

**[0012]** A detailed illustration of the profile extension (9) and the channel (8) are given in figures 6 and 7. When the plate (2) is fitted to the slot (3), the profile (1) is pushed in direction of X, so that the profile extension (9) is introduced into the channel (8) in a sliding manner. So the profile (1) comes to its closed position illustrated in Figure 3. The profile (1) is fixed as a result of fitting at least one retaining lug (7) disposed on this extension (9) to at least one recess (10) provided on the body (4). When it is desired to bring the profile (1) to its open position as illustrated in Figure 4, the side wall (5) of the profile extension (9) is depressed, such that the retaining lug (7) provided on the profile extension (9) is released from the recess (10). When the retaining lug (7) is released from the recess (10), the upper profile (1) is pulled in direction of X' and brought to its open position.

**[0013]** Figure 8 gives a detailed illustration of the channel (8). This channel (8) is fastened to the front plate (12) so that the profile extension (9) can be moved in said channel (8). In order to prevent the profile (1) extension (9) moving in said channel (8) from coming out of the channel when the profile is pulled in direction of X' in order to bring it to its open position, at least one stopper (11) is disposed on at least one side wall of said channel (8). In this manner, the user is enabled to easily remove and attach back the plate (2) without having to dismantle any component from the door (K).

### Claims

1. A cooking device door (K) comprising at least one front plate (12); at least one inner plate (2), fitted to at least one slot (3) disposed on at least one body (4) provided on the side of said plate (12) facing the interior of the cooking device; and at least one upper profile (1), fixing the opposite edge of the inner plate (2) not fitted to the slot (3) to the front plate (12), **characterized by** further comprising
  - at least one profile extension (9) extending toward the body (4) on at least one end of the upper profile (1),
  - at least one channel (8), provided on the side of the front plate (12) facing the interior of the cooking device, and in which (8) said upper profile (1) is moved in direction of X-X' in a sliding manner, as a result of introducing said profile extension (9) therein, and
  - at least one support element (6) with at least one aperture (6'), disposed on the upper profile (1), and into which said plate (2) is fitted.
2. The cooking device door (K) according to Claim 1,

**characterized by** comprising at least one recess (10) disposed on said body (4).

3. The cooking device door (K) according to Claim 2, **characterized by** comprising at least one retaining lug (7) disposed on at least one side wall (5) of said profile extension (9), said retaining lug (7) being fitted to said recess (10) disposed on the body (4) so as to fix the upper profile (1). 5  
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4. The cooking device door (K) according to Claim 1, **characterized by** comprising at least one stopper (11) disposed on at least one side wall of said channel (8), said stopper (11) preventing the upper profile (1) extension (9) moving in said channel (8) from coming out of the channel (8) when the profile (1) is pulled in direction of X'. 15  
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5. The cooking device door (K) according to Claim 1, **characterized in that** said plates (2, 12) are made of a heat-resistant transparent material. 25  
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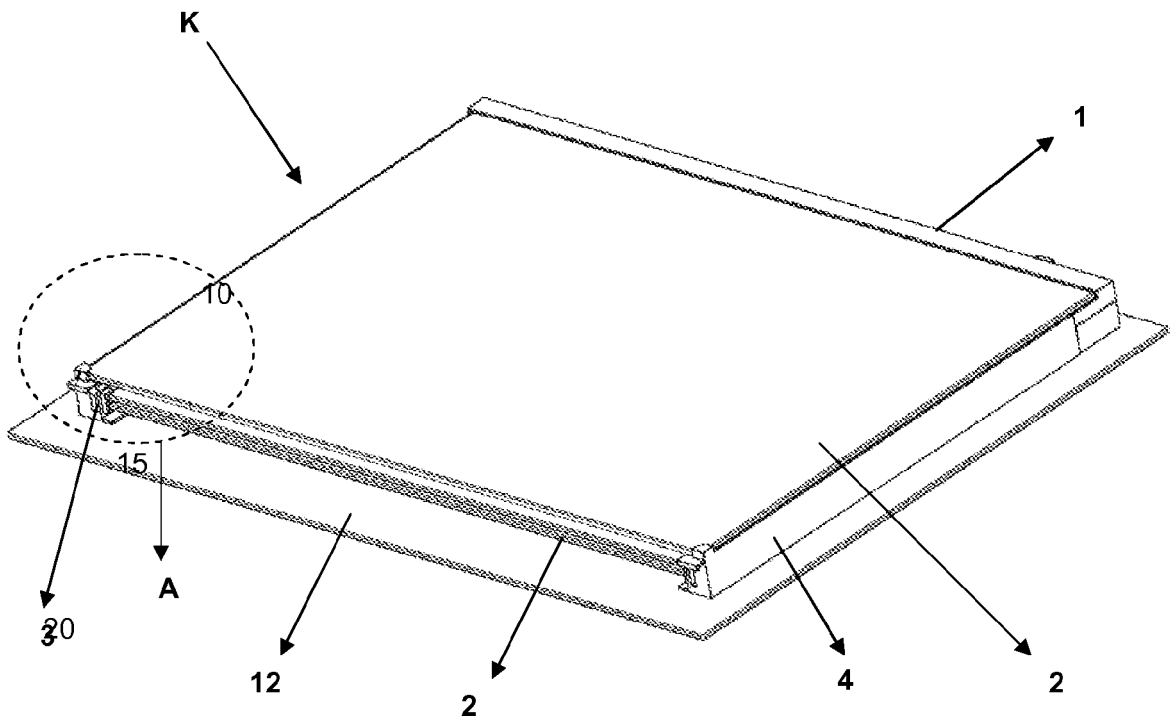


Figure 1

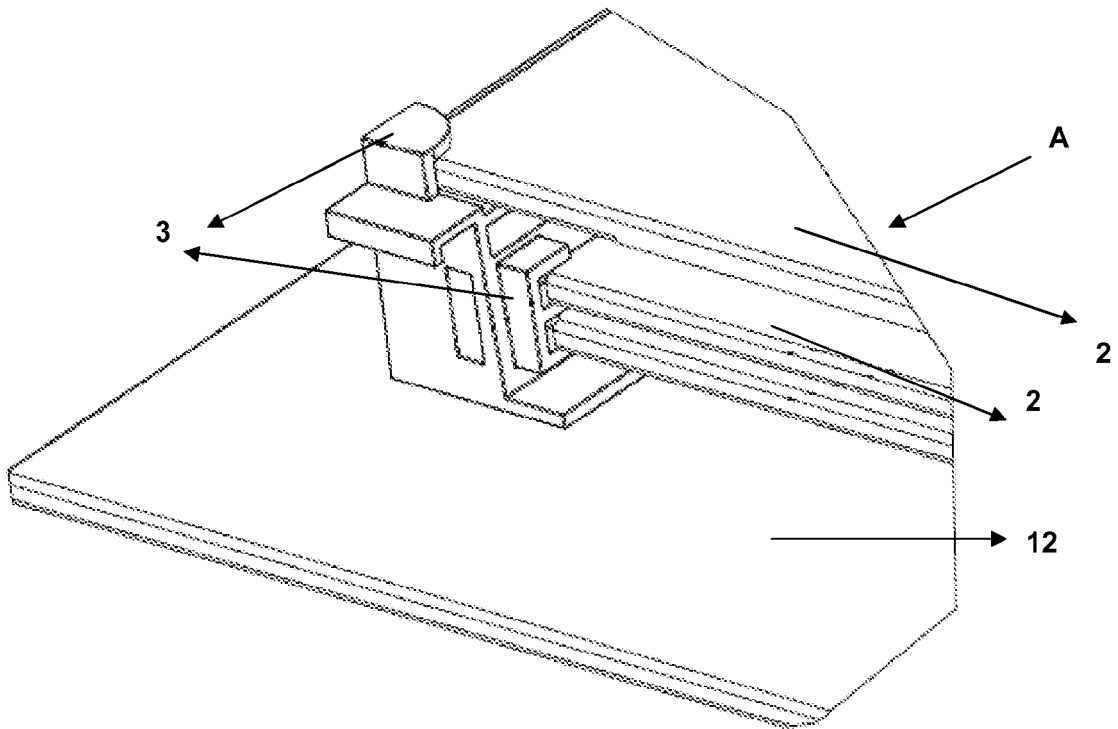


Figure 2

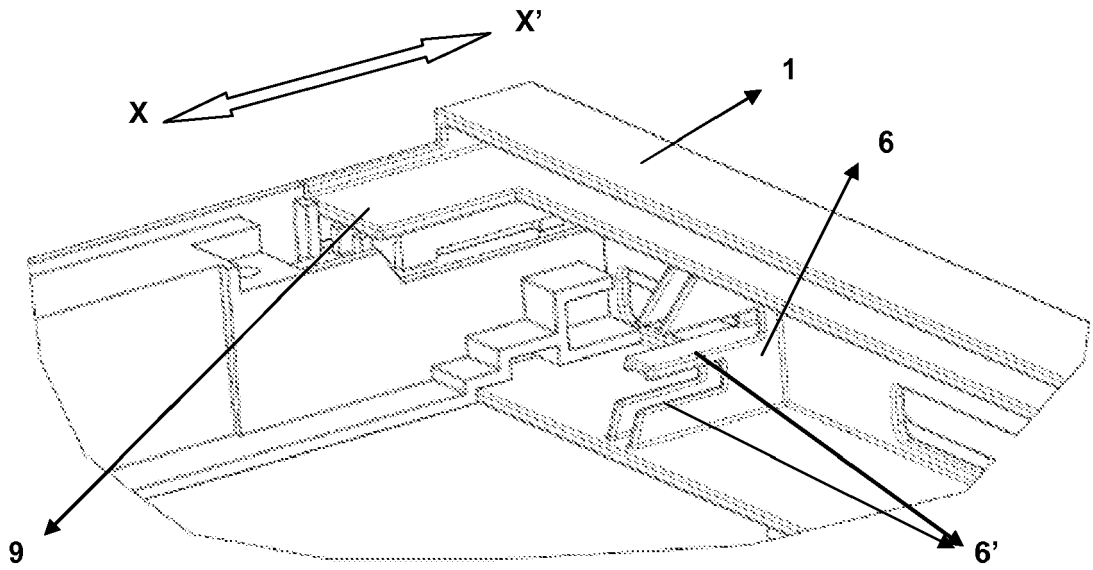


Figure 3

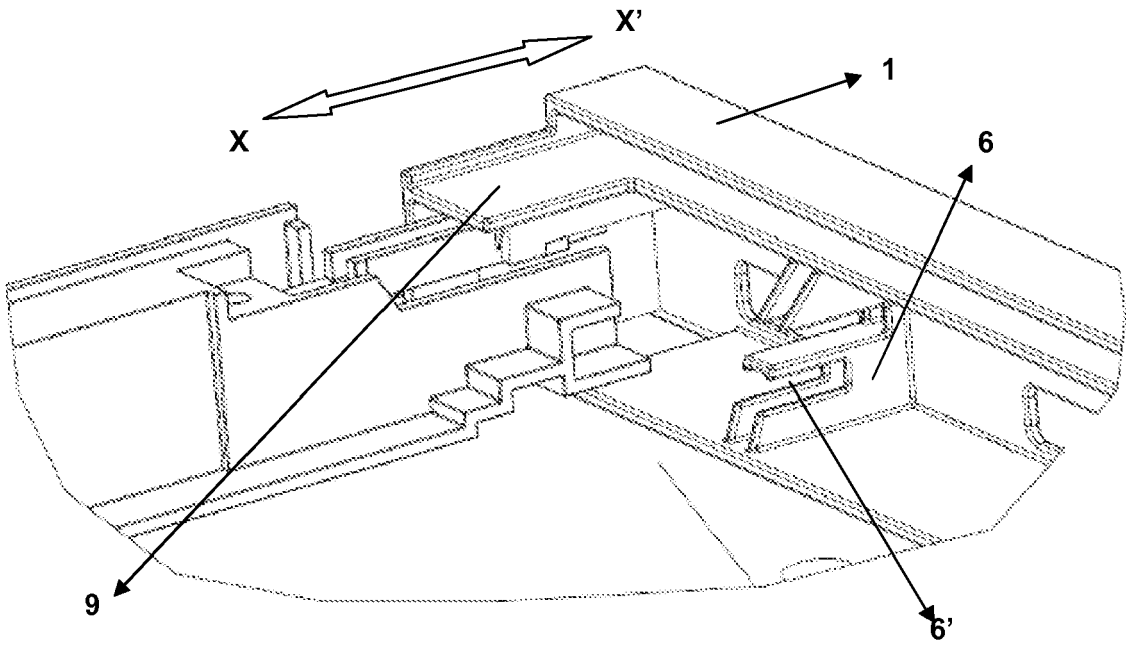


Figure 4

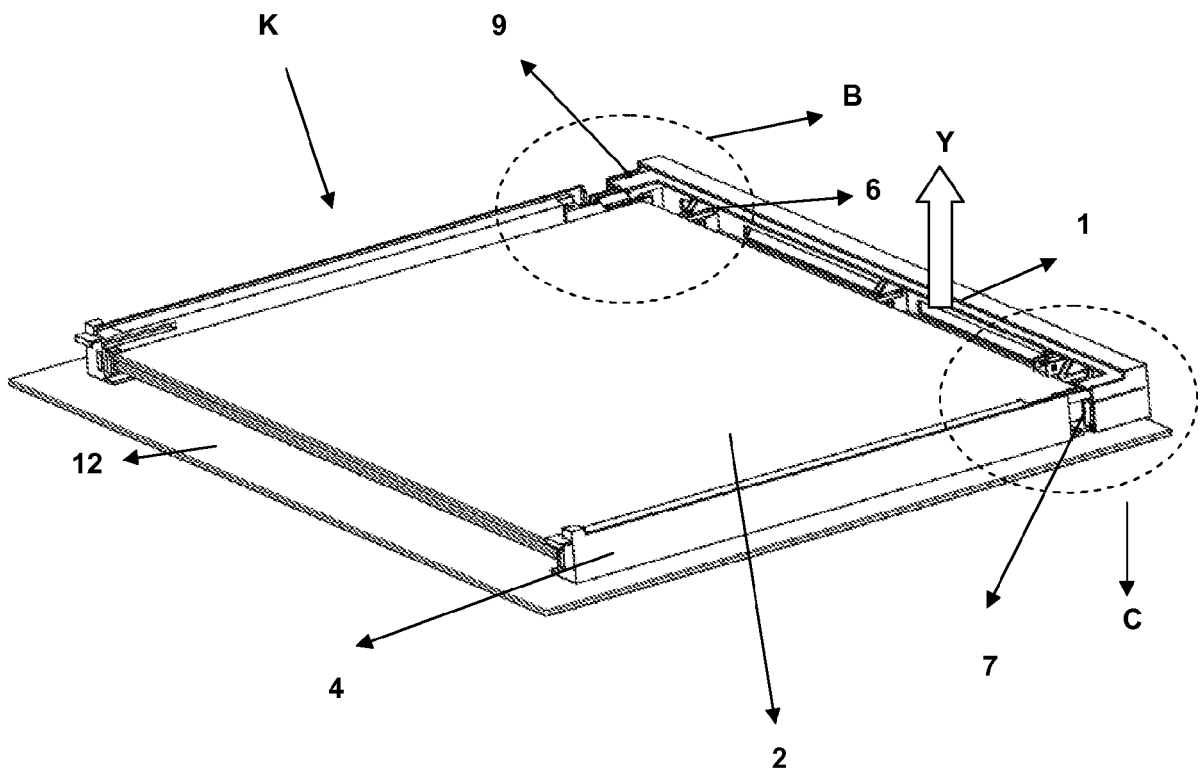


Figure 5

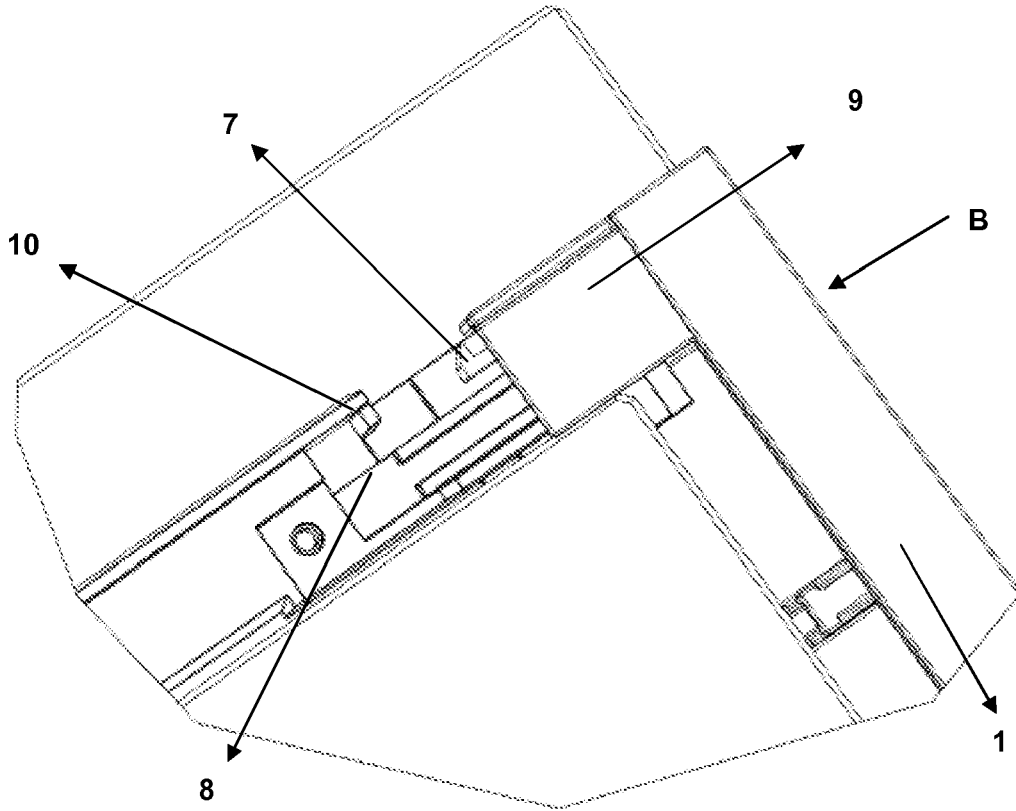


Figure 6



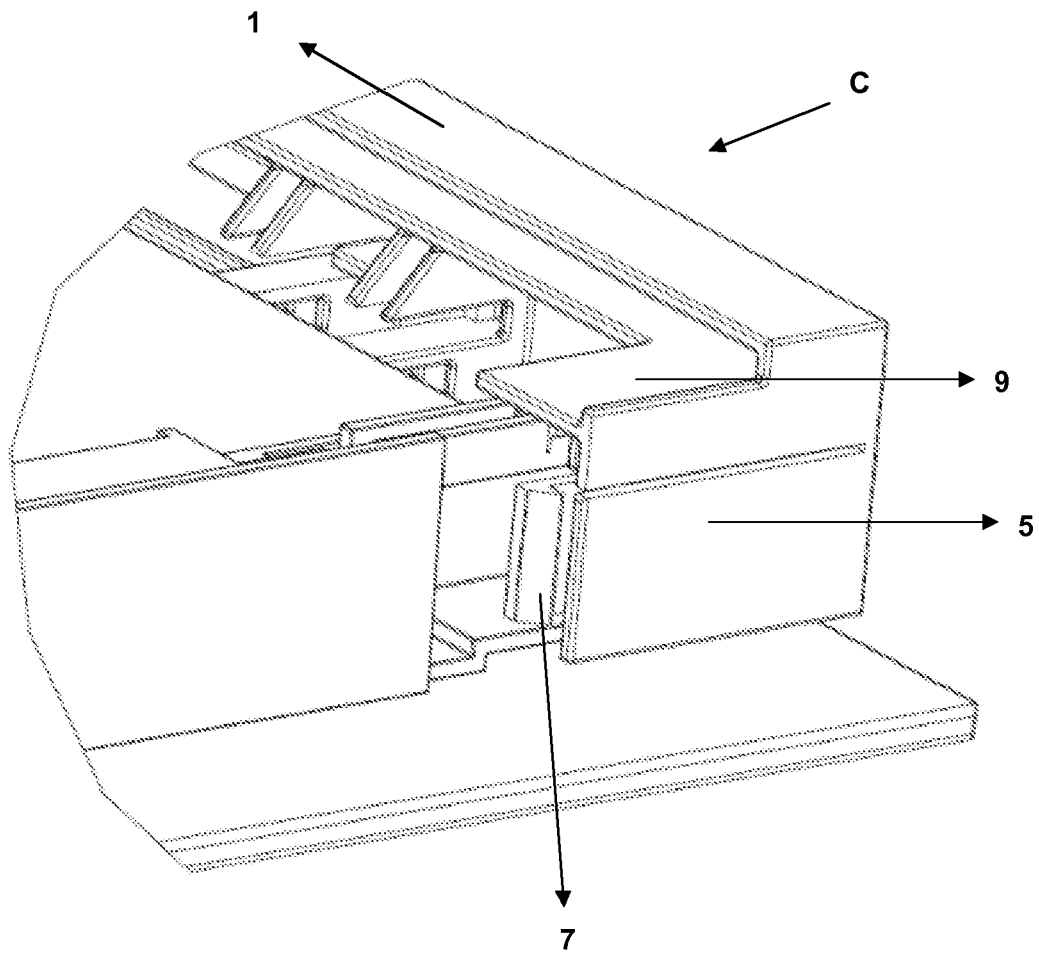


Figure 7

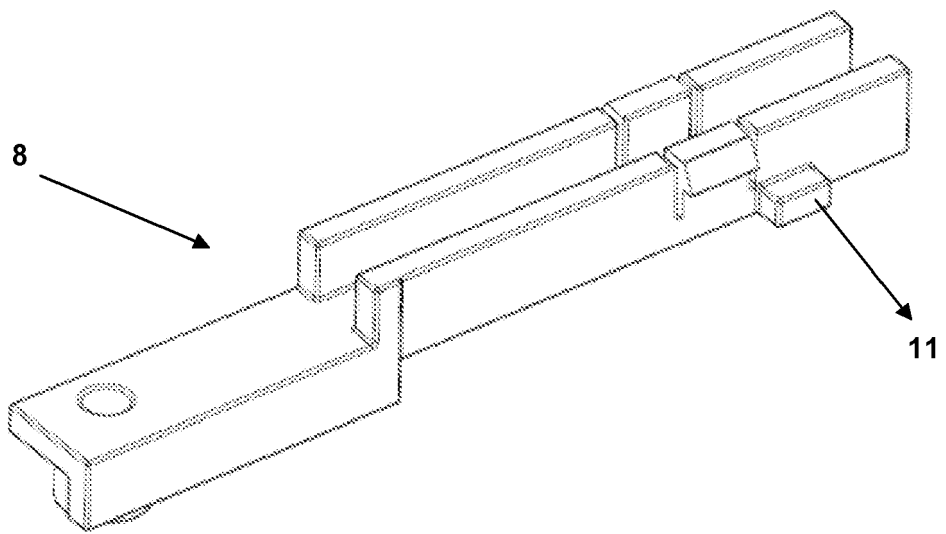


Figure 8



EUROPEAN SEARCH REPORT

Application Number  
EP 11 15 6479

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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			F24C A61F H05B E06B F24B F24F
1	Place of search The Hague	Date of completion of the search 11 October 2011	Examiner Adant, Vincent
CATEGORY OF CITED DOCUMENTS		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	
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ON EUROPEAN PATENT APPLICATION NO.

EP 11 15 6479

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11-10-2011

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