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(54) **HOOD FOR EXTRACTING FUMES**

DUNSTABZUGSHAUBE

HOTTE POUR L'EXTRACTION DES FUMÉES

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Description

Field of the invention

[0001] The present invention relates to a fume extractor hood. In particular, this hood is preferably but without limitation designed to extract cooking fumes from food. A hood of this type suitably finds application in kitchens of canteens, restaurants, hotels, private homes and other places, as defined in the preamble of claim 1.

[0002] More in detail, the hood of the present invention is of the type designed to at least partially fit in a receptacle formed in a ceiling. This ceiling has an outer surface that faces the room occupied by users, e.g. the kitchen. The ceiling further has an inner surface, hidden from view of hood users, and at least partially defines the aforementioned receptacle. The inner surface is opposite to the outer surface.

Background art

[0003] Cooking fume extractor hoods that can fit at least partially in a receptacle formed in a ceiling are known in the art, also as ceiling hoods.

[0004] Prior art hoods generally comprise a frame that partially defines a suction duct. This frame also defines a suction opening, through which cooking fumes are drawn into the the suction duct, filtered and exhausted.

[0005] More in detail, the frame has at least one pair of opposite sides. If the opening has a rectangular shape, then the frame comprises two pairs of opposite sides. A first pair of opposite sides is defined by the two long sides of the frame, and a second pair is defined by the two short sides.

[0006] In particular, in prior art hoods, the frame is designed to at least partially fit in the receptacle. In order to facilitate installation, prior art hoods comprise spring-actuated lock members at the long sides of the frame. Typically, prior art hoods comprise two lock members at each side.

[0007] More in detail, each of the lock members comprises a lug that is designed to retract into a perimeter of the frame and allow the frame to fit into the receptacle. Once the frame has been positioned, the lug is deployed to rest on the inner wall of the receptacle. Then the frame is fastened to the ceiling by means of screws.

[0008] Relevant prior art may be found in EP 0 490 074 A1 as well as DE 10 2014 205901 A1.

The problem of the prior art

[0009] One drawback of this arrangement is that, while these hoods can be easily positioned and installed, the reverse operation is not as easy. Once the screws are removed, the operator should find a way to push the lug toward the frame to remove the hood. These lugs are placed in locations that are hard to reach when the hood is installed, whereby the operation is complex and time-

consuming.

[0010] Furthermore, the operator must use both hands to disengage the lugs, whereby the support of at least one more person is needed to hold the hood as it is being removed.

Object of the Invention

[0011] Therefore, the technical purpose of the present invention is to provide a cooking fume extractor hood that can obviate the aforementioned prior art drawbacks.

[0012] In particular, the object of the present invention is to provide a fume extractor hood that can allow a single operator to remove the hood from the ceiling.

[0013] The aforementioned technical purpose and objects are substantially fulfilled by a cooking fume extractor hood that comprises the technical features as disclosed in one or more of the accompanying claims.

Advantages of the Invention

[0014] In particular, a cooking fume extractor hood according to one embodiment of the present invention is of the type designed to at least partially fit in a receptacle formed in a ceiling. This ceiling has an outer surface and an inner surface opposite to the outer surface. The inner surface at least partially defines the receptacle.

[0015] The hood of the present invention comprises a frame that has at least one pair of opposite sides. The frame is configured to at least partially fit in the receptacle. The frame has a center axis is perpendicular to the sides.

[0016] The hood also comprises at least a lock member at one of the sides of the frame. The lock member comprises a deployable portion adapted to alternate between a deployed configuration and a retracted configuration. In the deployed configuration, the deployable portion rests on the inner surface of the ceiling to hold the frame in the receptacle. In the retracted configuration, the deployable portion is pulled back into a perimeter of the frame, to allow the frame to be moved into and out of the receptacle.

[0017] The lock member comprises at least one elastic element associated with the deployable portion to bias the latter from the retracted configuration to the deployed configuration.

[0018] The lock member comprises a grip element connected to the deployable portion. This grip element is able to move along the center axis of the frame. Instead of or in addition to the above, the grip element is able to rotate about a longitudinal main axis of extension which is substantially parallel to the center axis. The grip element is also placed in a position that allows access thereto when the frame fits in the receptacle. The grip element is adapted to be actuated to pull the deployable portion from the deployed configuration back to the retracted configuration.

[0019] The hood of the invention solves the aforemen-

tioned technical problem because the grip element allows the deployable portion to be easily pulled back by the lock member, particularly using one hand. Thus, the operator can use the other hand to hold the hood and is therefore able to complete the disassembly process without the help of another person.

BRIEF DESCRIPTION OF THE FIGURES

[0020] Further features and advantages of the present invention will result more clearly from the illustrative, non-limiting description of a preferred, non-exclusive embodiment of a fume extractor hood as shown in the annexed drawings, in which:

- Figure 1 is a bottom perspective view of a first embodiment of a fume extractor hood of the present invention;
- Figure 2 is a top perspective view of the hood of Figure 1;
- Figure 3 is a sectional side view of a detail of the hood of Figures 1 and 2, in a first operating configuration;
- Figure 4 is a sectional side view of the detail of Figure 3 in a second operating configuration; and
- Figure 5 is a sectional side view of a detail of Figure 3 in a third operating configuration;
- Figure 6 is a sectional side view of a second embodiment of a fume extractor hood of the present invention;
- Figure 7 is a sectional side view of a detail of the hood of Figure 1, in a first operating configuration;
- Figure 8 is a sectional side view of the detail of Figure 7 in a second operating configuration; and
- Figure 9 is a sectional side view of a detail of Figure 7 in a third operating configuration;
- Figure 10 is a sectional side view of a detail of Figure 7 in a fourth operating configuration;
- Figure 11 is a sectional side view of a detail of Figure 7 in a fifth operating configuration;

DETAILED DESCRIPTION

[0021] Even when this is not expressly stated, the individual features as described with reference to the particular embodiments shall be intended as auxiliary to and/or interchangeable with other features described with reference to other exemplary embodiments.

[0022] Referring to the annexed figures, numeral 1 generally designates a fume extractor hood of the present invention.

[0023] The hood 1 is particularly of the type designed to at least partially fit in a receptacle 100 formed in a ceiling 101. By way of example, the ceiling 101 has an outer surface 101a and an inner surface 101b opposite to the outer surface 101a. The receptacle 100 is at least partially defined by the inner surface 101b.

[0024] It shall be noted that, as used herein, the outer surface 101a is the surface of the ceiling 100 that is

exposed to the view of people underneath, regardless of whether the ceiling 101 is located indoors, within a building, or outdoors, such as in a porch. Likewise, the inner surface 101b is the surface that is generally hidden to people below the ceiling 101.

[0025] It shall be further noted that, as used herein, the term "ceiling" is intended to designate any surface defining the top of a room or environment. Therefore, this term also encompasses other architectural or furnishing elements such as false ceilings or furniture that possibly locally define the top of the environment in which they are located.

[0026] Particularly referring to Figures 1 and 6, the hood 1 comprises a frame 2. The frame 2 is designed to at least partially fit in the receptacle 100 formed in the ceiling 101.

[0027] In particular, the frame has at least one pair of opposite sides 3a, 3b. All the sides 3a, 3b of the frame 2 define an outer perimeter of the frame 2. By way of example, the frame 2 has a rectangular perimeter, and comprises two pairs of opposite sides 3a, 3b. A first pair of opposite sides 3a is defined by the two long sides 3a of the frame, and a second pair of sides 3b is defined by the two short sides 3b. In particular, each long side 3a is contiguous to the two short sides 3b and is opposite the other long side 3a. Likewise, each short side 3b is contiguous to the two long sides 3a and is opposite the other short side 3b. The frame 2 has a center axis "V", which extends substantially perpendicular to the sides 3a, 3b. In operation, the center axis "V" extends in a vertical direction.

[0028] In certain alternative embodiments of the hood 1, not shown herein, the frame 2 may have a perimeter having a shape other than a rectangle. In this case, the above indications concerning the rectangular frame 2 apply to the sides 3a and 3b, but the sides 3a, 3b will be identified differently. By way of example, if the frame 2 has a circular perimeter the sides 3a, 3b will be defined by arcs of a circle.

[0029] It shall be noted that, with shapes other than the rectangle, the relative positions of the sides of the frame 2 may be other than those exemplified in Figures 1 and 2 and 6. As a result, the term "opposite" as previously used concerning the rectangular configuration shall be interpreted in a different way. In particular, two sides are deemed to be opposite to each other simply when they are not contiguous. For example, in the case of a frame 2 having a hexagonal shape, each side would have three opposite sides, i.e. is all the sides except those contiguous thereto.

[0030] The frame 2 further comprises a base 4 which, in operation, is placed below and projects out of the ceiling 101. In particular, the base 4 has an outer surface 4a that is designed to be visible by people underneath the hood 1. The base 4 further has an inner surface 4b, opposite to the outer surface 4a which, in operation, is hidden to people underneath the hood 1.

[0031] The frame 2 has a suction opening 5 at the base

4, particularly at the outer surface 4a. In cooking fume extractor hoods 1, the opening 5 generally faces a cooktop (not shown), which is designed to draw in the fumes generated during operation of such cooktop to cook food.

[0032] The hood 1 further has a suction duct 6, through which the fumes extracted through the opening are channeled by the hood 1. The frame 2 further at least partially defines the duct 6. By way of example, the duct 6 of the hood 1 may extend in the vertical direction identified by the center axis "V" of the frame 2.

[0033] It shall be further noted that the frame 2 has at least one housing (not shown) for a filter. In particular, the hood 1 generally comprises at least one first housing for a grease filter and at least one second housing for an odor filter. Since the fumes extracted through the opening 5 are channeled through the housings to be filtered, these housings are deemed to be part of the suction duct 6.

[0034] Optionally, the hood 1 may comprise a cover element 16 which is associated with the suction opening 5 to at least partially close it. As shown for example in Figure 1 and in Figure 16, the cover element 16 may be embodied by a panel 17 that partially lies on the opening 5. This panel is spaced apart from the frame 2, to thereby leave one or more free peripheral slits 18, allowing fume extraction and minimizing the aesthetic impact of the hood 1.

[0035] According to the present invention, the hood 1 comprises at least one lock member 9, which has the purpose to hold the frame 2 in the receptacle 100 of the ceiling 101, by particularly resting on the aforementioned inner surface 101b. This lock member 9 is placed at one of the aforementioned sides 3a, 3b of the frame 2. Preferably, the hood 1 comprises a plurality of such lock members 9, which are placed on two opposite sides 3a, 3b of the frame 2. In the embodiment as described above, the hood 1 comprises four lock members 9, evenly arranged on the long sides 3a of the frame 2.

[0036] In particular, each lock member 9 comprises a support 12 attached to the frame 2. This support 12 extends away from the inner surface 4b of the base 4, substantially at the side 3a, 3b of the frame 2 on which the respective lock member 9 is mounted. It shall be noted that the support 12 is located entirely inside the outer perimeter of the frame 2.

[0037] Particularly referring to Figure 3 and Figure 7, each lock member 9 comprises a deployable portion 10. Such deployable portion 10 has a direction of deployment "D" perpendicular to the side 3a, 3b with the respective lock member 9. The direction of deployment "D" is also perpendicular to the center axis "V" of the frame 2.

[0038] More in detail, the deployable portion 10 is designed to alternate between a deployed configuration and a retracted configuration. In the deployed configuration, the deployable portion 10 rests on the inner surface 101b of the receptacle 100, to thereby hold the frame 2 in the receptacle 100. In the retracted configuration, the deployable portion 10 is pulled back into the outer perimeter of the frame 2. In this configuration, the frame 2

may be moved into and/or out of the receptacle 100.

[0039] Particularly referring to Figure 3 and Figure 7, the lock member 9 comprises a connecting portion 30. This connecting portion 30 has the purpose of joining the deployable portion 10 to the frame 2, in particular to the support 12 of its respective lock member 9.

[0040] More in detail, the connecting portion 30 has first 30a and second 30b opposite ends. The second end 30b is connected to the deployable portion 10. In particular, the connecting portion 30 is connected to the deployable portion 10 at a hinge axis "A". This hinge axis "A" is substantially perpendicular to the center axis "V" and to the direction of deployment "D".

[0041] In the embodiment as shown in Figures 3-5, the first end 30a of the connecting portion 30 is rotatably attached to the frame 2, in particular to the support 12, to rotate about an additional hinge axis "K" parallel to the hinge axis "A".

[0042] On the other hand, in the embodiment as shown in Figures 7-11, the connecting portion 30 slides along a longitudinal axis "B" substantially parallel to the center axis "V".

[0043] It shall be noted that, in both illustrated embodiments, the deployable portion 10 is embodied by a lug 13 that is pivotally connected to the connecting portion 30. The lug 13 has first 13a and second 13b opposite ends. The first end 13a of the lug 13 is pivotally connected to the connecting portion 30, to pivot relative to the hinge axis "A". The second end 13b is designed to contact the inner surface 101b of the ceiling 101.

[0044] It shall be noted that, when the deployable portion 10 is in the deployed configuration, the lug 13 is pivoted relative to the support 12 to extend partially beyond the outer perimeter of the frame 2. This allows the second end 13b of the lug 13 to rest on the aforementioned inner surface 101b of the ceiling 101.

[0045] Conversely, when the deployable portion 10 is in the retracted configuration, the lug 13 is moved toward the support 12 by pivoting relative to the hinge axis "A". By this arrangement, the lug 13 entirely fits into the perimeter of the frame 2.

[0046] Particularly referring to Figures 3 and 7, the lock member 9 comprises at least one elastic element 11 associated with the deployable portion 10 to bias the latter from the retracted configuration to the deployed configuration. More in detail, the elastic element 11 is operable between the connecting portion 30 and the deployable portion 10 to open them apart.

[0047] More in detail, the elastic element 11 is embodied by a torsion spring 14 disposed between the lug 13 and the connecting portion 30, particularly at the hinge axis "A".

[0048] According to the invention, the lock member 9 comprises a grip element 15. This grip element 15 is connected to connecting portion 10 between the ends 30a, 30b. The grip element 15 also identifies the aforementioned longitudinal axis "B".

[0049] In both illustrated embodiments, the grip ele-

ment 15 is connected to the deployable portion 10 and is placed in a position that allows access thereto when the frame 2 fits in the receptacle 100. The grip element 15 may be actuated to pull the deployable portion from the deployed configuration back to the retracted configuration.

[0050] It shall be noted that the grip element 15 shall be deemed to be accessible if its use requires at most removal of parts of the hood 1, such as the cover element 16, which can be easily removed as part of ordinary maintenance and, in particular, with the frame 2 fitting in the receptacle 101. As a result, the grip element 15 has at least one portion placed in front of the frame 2 and particularly of all the components of the hood 1 which can be only disconnected from the frame 2 when the latter does not fit in the its receptacle 100 in the ceiling 101. Further details about the grip element 15 will be provided hereinbelow.

[0051] In the embodiment of Figure 3, it shall be noted that the lock member 9 comprises a pin 32 that is pivotally connected to the connecting portion 30 between the ends 30a, 30b. In particular, the pin 32 is designed to pivot about an axis of rotation "P". The axis of rotation "P" is parallel to the hinge axes A, K about which the connecting portion 30 is hinged.

[0052] In the embodiment of Figure 7, the lock member 9 has a sleeve 25. This sleeve 25 is rigidly joined to the connecting portion 30 and is configured to translate along the grip element 15.

[0053] Referring back to the grip element 15, it shall be noted that in both illustrated embodiments it comprises a screw 33. This screw 33 is rigidly joined to the support 12 of the lock member 9, to be screwed in and out of the support 12. The screw 33 is oriented parallel to the center axis "V" and hence in a vertical direction. In particular, the axis of rotation of the screw 33 defines the aforementioned longitudinal main axis of extension "B".

[0054] In a first embodiment of the invention, as shown in Figures 3-5, the screw 33 can be also screwed in and out of the pin 32 to move the pin 32 along the center axis "V". By screwing the screw 33 in and out, the user will be able to act on the lock member 9 from outside the frame 2. In particular, by varying the position of the pin 32 along the center axis "V", the user will be able to pivot the connecting portion 30 relative to the frame 2.

[0055] In a second embodiment of the invention, as shown in Figures 7 to 11, the screw 33 may also be screwed in the sleeve 25 to move the latter along the longitudinal axis "B". For this purpose, the sleeve 25 has a threaded inner surface 25a.

[0056] With reference to the first embodiment as shown in Figures 3-5, the lock member 9 has a projection 31, which is adapted to push the deployable portion 10 toward the interior of the frame 2, thereby causing it to alternate from the deployed configuration to the retracted configuration. More in detail, the projection 31 is placed on the deployable portion 10, opposite to the connecting portion 30, and protrudes outside of the frame 2. In

particular, the projection 31 is formed proximate to the connecting portion 30, and is more particularly placed substantially level with the first end 13a of the lug 13.

[0057] In order to interact with the projection 31, the support 12 has an abutment zone 34. Such abutment zone 34 faces the projection 31, such that the projection 31 will abut the abutment zone 34 to push the deployable portion 10 into the retracted configuration.

[0058] In the second embodiment, as shown in Figures 7 to 11, the above described projection 31 is omitted. Therefore, the abutment zone 34 directly faces the deployable portion 10. As the deployable portion 10 rises, it directly abuts the abutment portion 34, to be pushed by the latter into the retracted configuration.

[0059] In operation, when the hood 1 fits into the receptacle 100, the deployable portions 10 are pushed into the retracted configuration but once the lock members 9 extend past the inner surface 101b, they are pushed into the deployed configuration by the elastic elements 11.

[0060] In order to pull the hood 1 out, the user disengages each lock member 9 by acting on its respective screw 33. In particular, in the first embodiment, the pin 32 is pushed upwards by screwing the screw out. As a result, the connecting portion 30 will be pivoted upwards, and the projection 31 will be moved to contact with the abutment zone 34. By further moving the pin 32 upwards, the abutment zone 34 will push the protrusion 31 to thereby impart an inward pivotal motion to the deployable portion 10, in particular against the elastic action of the elastic element 11. Then, the deployable portion 10 will be returned into the retracted configuration, which will cease the action of the lock member 9.

[0061] In the second embodiment, the user action on the screw 33 will cause the connecting portion 30 to translate upwards along the longitudinal axis "B". Then, the deployable portion 10 will move with the connecting portion 30, until it contacts the abutment zone 34 as shown, for example, in Figure 7. As the screw 33 is further screwed in the sleeve 25, the connecting portion 30 will further translate upwards. Then, the abutment zone 34 will push the deployable portion 10 into the retracted configuration, as shown for example in Figure 11.

45 Claims

1. A fume extraction hood (1) of the type that can at least partially fit into a receptacle (100) formed in a ceiling (101), said ceiling (101) having an outer surface (101a) and an inner surface (101b), the latter at least partially defining said receptacle (100) and being opposite to the outer surface (101a), said hood (1) comprising:

- a frame (2) having at least one pair of opposite sides (3a, 3b), said frame (2) being configured to fit at least partially into said receptacle (100), said frame (2) having a center axis (V) perpen-

dicular to said sides (3a, 3b);
 - at least one lock member (9) positioned at one of the said sides (3a, 3b) of said frame (2), said lock member (9) comprising a deployable portion (10) having a direction of deployment (D) perpendicular to its respective side (3a, 3b) of the frame (2) and to the center axis (V) and switchable between a deployed configuration in which it rests on said inner surface (101b) to retain said frame in said receptacle (100) and a retracted configuration in which it is pulled back inside a perimeter of said frame (2) to allow said frame (2) to be introduced into and removed from said receptacle (100), said lock member (9) comprising at least one elastic element (11) associated with said deployable portion (10) to push it from the retracted to the deployed configuration;

wherein the lock member (9) comprises a grip element (15) connected to said deployable portion (10) and arranged to be accessed when said frame (2) fits in said receptacle (100), said grip element (15) being movable along said center axis (V) and/or rotatable about a longitudinal main axis of extension substantially parallel to said center axis (V) to return said deployable portion (10) from the deployed to the retracted configuration; **characterized in that** said lock member (9) comprises a connecting portion (30) having a first end (30a) and a second end (30b) opposite to each other, said second end (30b) being connected to said deployable portion (10), said grip element (15) being connected to said connecting portion (10) between said ends (30a, 30b), wherein the connecting portion (30) is hinged to the deployable portion (10) at a hinge axis (A) that is substantially perpendicular to said center axis (V) and to said direction of deployment (D); wherein the elastic element (11) is operable between the connecting portion (30) and the deployable portion (10) to open them apart.

2. A hood (1) as claimed in the previous claim, **characterized in that** said connecting portion (30) slides along said longitudinal axis (B).
3. A hood (1) as claimed in any of the preceding claims, **characterized in that** said lock member (9) comprises a sleeve (25) which is rigidly joined to said connecting portion (30) and is configured to translate along said grip element (15).
4. A hood (1) as claimed in the preceding claim, **characterized in that** said grip element (15) comprises a screw (33) that can be screwed into the sleeve (25) to move it along said longitudinal axis of extension (B).
5. A hood (1) as claimed in any of the preceding claims,

characterized in that said lock member (9) has an abutment zone (34) facing said deployable portion (10) and configured to abut said deployable portion (10) to push it into the retracted configuration.

6. A hood (1) as claimed in claim 1, **characterized in that** the first end (30a) of said connecting portion (30) is pivotally attached to the frame (2).
7. A hood (1) as claimed in the preceding claim, **characterized in that** said lock element (9) comprises a support (12) attached to the frame (2), said first end (30a) of said connecting portion (30) being hinged to the support (9) to pivot about an additional hinge axis (K) parallel to the hinge axis (A).
8. A hood (1) as claimed in the preceding claim, **characterized in that** said lock member (9) has a projection (31) projecting out of said deployable portion (10) toward the outside of the frame (2) and opposite to the connecting portion (30), said support (12) having an abutment zone (34) facing said projection (31), said projection (31) being adapted to abut said abutment zone (34) to push the deployable portion (10) into the retracted configuration.
9. A hood (1) as claimed in the preceding claim, **characterized in that** said projection is located proximate to said connecting portion (30).
10. A hood (1) as claimed in any one of the claims from 6 to 9, **characterized in that** said lock member (9) comprises a pin (32) that is pivotally connected to the connecting portion (30) between said ends (30a, 30b), said grip member (15) comprising a screw (33) that can be screwed into the pin (32) to move said pin along said center axis (V).
11. A hood (1) as claimed in any of the preceding claims, **characterized in that** it comprises a plurality of said lock members (9) situated on both of said opposite sides (3a) of said frame (2).
12. A hood (1) as claimed in any of the preceding claims, **characterized in that** it comprises two of said lock members (9) situated on the same side (3a) of said frame (2).

50 Patentansprüche

1. Dunstabzugshaube (1) des Typs, der zumindest teilweise in eine Aufnahme (100) passen kann, die in einer Decke (101) gebildet ist, wobei die Decke (101) eine Außenfläche (101a) und eine Innenfläche (101b) aufweist, wobei Letztere die Aufnahme (100) zumindest teilweise definiert und der Außenfläche (101a) entgegengesetzt ist, wobei die Haube

(1) Folgendes umfasst:

- einen Rahmen (2), der mindestens ein Paar entgegengesetzter Seiten (3a, 3b) aufweist, wobei der Rahmen (2) dazu konfiguriert ist, mindestens teilweise in die Aufnahme (100) zu passen, wobei der Rahmen (2) eine Mittelachse (V) senkrecht zu den Seiten (3a, 3b) aufweist;
- mindestens ein Verriegelungselement (9), das an einer der Seiten (3a, 3b) des Rahmens (2) positioniert ist, wobei das Verriegelungselement (9) einen ausfahrbaren Abschnitt (10) umfasst, der eine Ausfahrrichtung (D) senkrecht zu seiner jeweiligen Seite (3a, 3b) des Rahmens (2) und zu der Mittelachse (V) aufweist, und zwischen einer ausgefahrenen Konfiguration, in der es auf der Innenfläche (101b) ruht, um den Rahmen in die Aufnahme (100) zu halten, und einer eingefahrenen Konfiguration, in der es innerhalb eines Umfangs des Rahmens (2) zurückgezogen ist, um zu erlauben, dass der Rahmen (2) in die Aufnahme (100) eingeführt und daraus entfernt wird, umschaltbar ist, wobei das Verriegelungselement (9) mindestens ein elastisches Element (11) umfasst, das dem ausfahrbaren Abschnitt (10) zugeordnet ist, um ihn aus der eingefahrenen in die ausgefahrene Konfiguration zu schieben;

wobei das Verriegelungselement (9) ein Griffelement (15) umfasst, das mit dem ausfahrbaren Abschnitt (10) verbunden und so eingerichtet ist, dass darauf zugegriffen wird, wenn der Rahmen (2) in die Aufnahme (100) passt, wobei das Griffelement (15) entlang der Mittelachse (V) bewegbar und/oder um eine Haupterstreckungslängsachse im Wesentlichen parallel zu der Mittelachse (V) drehbar ist, um den ausfahrbaren Abschnitt (10) aus der ausgefahrenen in die eingefahrene Konfiguration zurückzuführen; **dadurch gekennzeichnet, dass** das Verriegelungselement (9) einen Verbindungsabschnitt (30) umfasst, der ein erstes Ende (30a) und ein zweites Ende (30b), die einander entgegengesetzt sind, aufweist, wobei das zweite Ende (30b) mit dem ausfahrbaren Abschnitt (10) verbunden ist, wobei das Griffelement (15) zwischen den Enden (30a, 30b) mit dem Verbindungsabschnitt (10) verbunden ist, wobei der Verbindungsabschnitt (30) an dem ausfahrbaren Abschnitt (10) an einer Gelenkachse (A) angelenkt ist, die im Wesentlichen senkrecht zu der Mittelachse (V) und der Ausfahrrichtung (D) ist; wobei das elastische Element (11) zwischen dem Verbindungsabschnitt (30) und dem ausfahrbaren Abschnitt (10) betätigbar ist, um sie auseinander zu öffnen.

2. Haube (1) nach dem vorstehenden Anspruch, **dadurch gekennzeichnet, dass** der Verbindungsab-

schnitt (30) entlang der Längsachse (B) gleitet.

3. Haube (1) nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** das Verriegelungselement (9) eine Hülse (25) umfasst, die fest mit dem Verbindungsabschnitt (30) verbunden ist und dazu konfiguriert ist, entlang des Griffelements (15) verschoben zu werden.
4. Haube (1) nach dem vorstehenden Anspruch, **dadurch gekennzeichnet, dass** das Griffelement (15) eine Schraube (33) umfasst, die in die Hülse (25) geschraubt werden kann, um sie entlang der Längs-erstreckungsachse (B) zu bewegen.
5. Haube (1) nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** das Verriegelungselement (9) eine Anschlagzone (34) aufweist, die dem ausfahrbaren Abschnitt (10) zugewandt ist und dazu konfiguriert ist, an dem ausfahrbaren Abschnitt (10) anzuschlagen, um ihn in die eingefahrene Konfiguration zu drücken.
6. Haube (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** das erste Ende (30a) des Verbindungsabschnitts (30) schwenkbar an dem Rahmen (2) befestigt ist.
7. Haube (1) nach dem vorstehenden Anspruch, **dadurch gekennzeichnet, dass** das Verriegelungselement (9) einen Träger (12) umfasst, der an dem Rahmen (2) angebracht ist, wobei das erste Ende (30a) des Verbindungsabschnitts (30) an dem Träger (9) angelenkt ist, um eine zusätzliche Gelenkachse (K) parallel zu der Gelenkachse (A) zu schwenken.
8. Haube (1) nach dem vorstehenden Anspruch, **dadurch gekennzeichnet, dass** das Verriegelungselement (9) einen Vorsprung (31) aufweist, der aus dem ausfahrbaren Abschnitt (10) zu der Außenseite des Rahmens (2) und dem Verbindungsabschnitt (30) entgegengesetzt vorsteht, wobei der Träger (12) eine Anschlagzone (34) aufweist, die dem Vorsprung (31) zugewandt ist, wobei der Vorsprung (31) dazu angepasst ist, an die Anschlagzone (34) anzuschlagen, um den ausfahrbaren Abschnitt (10) in die eingefahrene Konfiguration zu drücken.
9. Haube (1) nach dem vorstehenden Anspruch, **dadurch gekennzeichnet, dass** der Vorsprung neben dem Verbindungsabschnitt (30) liegt.
10. Haube (1) nach einem der Ansprüche 6 bis 9, **dadurch gekennzeichnet, dass** das Verriegelungselement (9) einen Stift (32) umfasst, der schwenkbar mit dem Verbindungsabschnitt (30) zwischen den Enden (30a, 30b) verbunden ist, wobei das Griff-

élément (15) une vis (33) comprend, qui est vissée dans le support (12) fixé au cadre (2), ladite première extrémité (30a) de ladite partie de liaison (30) étant articulée sur le support (9) pour pivoter autour d'un axe d'articulation supplémentaire (K) parallèle à l'axe d'articulation (A).

11. Haube (1) nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** sie eine Vielzahl der Verriegelungselemente (9) umfasst, die sich auf beiden gegenüberliegenden Seiten (3a) des Rahmens (2) befinden.
12. Haube (1) nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** sie zwei der Verriegelungselemente (9) umfasst, die sich auf der gleichen Seite (3a) des Rahmens (2) befinden.

Revendications

1. Hotte d'extraction de fumées (1) du type qui peut s'adapter au moins partiellement dans un logement (100) formé dans un plafond (101), ledit plafond (101) présentant une surface extérieure (101a) et une surface intérieure (101b), cette dernière définissant au moins partiellement ledit logement (100) et étant opposée à la surface extérieure (101a), ladite hotte (1) comprenant :

- un cadre (2) présentant au moins une paire de côtés opposés (3a, 3b), ledit cadre (2) étant configuré pour s'adapter au moins partiellement dans ledit logement (100), ledit cadre (2) présentant un axe central (V) perpendiculaire auxdits côtés (3a, 3b) ;

- au moins un élément de verrouillage (9) positionné au niveau de l'un desdits côtés (3a, 3b) dudit cadre (2), ledit élément de verrouillage (9) comprenant une partie déployable (10) présentant une direction de déploiement (D) perpendiculaire à son côté respectif (3a, 3b) du cadre (2) et à l'axe central (V) et commutable entre une configuration déployée dans laquelle elle repose sur ladite surface interne (101b) pour retenir ledit cadre dans ledit logement (100) et une configuration rétractée dans laquelle elle est rentrée à l'intérieur d'un périmètre dudit cadre (2) pour permettre audit cadre (2) d'être introduit dans ledit et extrait dudit logement (100), ledit élément de verrouillage (9) comprenant au moins un élément élastique (11) associé à ladite partie déployable (10) pour le pousser de la configuration rétractée à la configuration déployée ;

dans laquelle l'élément de verrouillage (9) comprend un élément de préhension (15) relié à ladite partie déployable (10) et agencé pour être accessible lorsque ledit cadre (2) s'adapte dans ledit logement (100), ledit élément de préhension (15) étant mobile

le long dudit axe central (V) et/ou rotatif autour d'un axe principal longitudinal d'extension sensiblement parallèle audit axe central (V) pour ramener ladite partie déployable (10) de la configuration déployée à la configuration rétractée ; **caractérisée en ce que** ledit élément de verrouillage (9) comprend une partie de liaison (30) présentant une première extrémité (30a) et une seconde extrémité (30b) opposées l'une à l'autre, ladite seconde extrémité (30b) étant reliée à ladite partie déployable (10), ledit élément de préhension (15) étant relié à ladite partie de liaison (10) entre lesdites extrémités (30a, 30b), dans laquelle la partie de liaison (30) est articulée sur la partie déployable (10) au niveau d'un axe d'articulation (A) qui est sensiblement perpendiculaire audit axe central (V) et à ladite direction de déploiement (D) ; dans laquelle l'élément élastique (11) peut être actionné entre la partie de liaison (30) et la partie déployable (10) pour les écarter.

2. Hotte (1) selon la revendication précédente, **caractérisée en ce que** ladite partie de liaison (30) coulisse le long dudit axe longitudinal (B).

3. Hotte (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** ledit élément de verrouillage (9) comprend un manchon (25) qui est lié de manière rigide à ladite partie de liaison (30) et est configuré pour se déplacer en translation le long dudit élément de préhension (15).

4. Hotte (1) selon la revendication précédente, **caractérisée en ce que** ledit élément de préhension (15) comprend une vis (33) qui peut être vissée dans le manchon (25) pour le déplacer le long dudit axe longitudinal d'extension (B).

5. Hotte (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** ledit élément de verrouillage (9) présente une zone de butée (34) faisant face à ladite partie déployable (10) et configurée pour venir en butée contre ladite partie déployable (10) pour la pousser dans la configuration rétractée.

6. Hotte (1) selon la revendication 1, **caractérisée en ce que** la première extrémité (30a) de ladite partie de liaison (30) est fixée de manière pivotante au cadre (2).

7. Hotte (1) selon la revendication précédente, **caractérisée en ce que** ledit élément de verrouillage (9) comprend un support (12) fixé au cadre (2), ladite première extrémité (30a) de ladite partie de liaison (30) étant articulée sur le support (9) pour pivoter autour d'un axe d'articulation supplémentaire (K) parallèle à l'axe d'articulation (A).

8. Hotte (1) selon la revendication précédente, **caractérisée en ce que** ledit élément de verrouillage (9) présente une saillie (31) dépassant de ladite partie déployable (10) vers l'extérieur du cadre (2) et à l'opposé de la partie de liaison (30), ledit support (12) présentant une zone de butée (34) faisant face à ladite saillie (31), ladite saillie (31) étant conçue pour venir en butée contre ladite zone de butée (34) pour pousser la partie déployable (10) dans la configuration rétractée.
9. Hotte (1) selon la revendication précédente, **caractérisée en ce que** ladite saillie est située à proximité de ladite partie de liaison (30).
10. Hotte (1) selon l'une quelconque des revendications 6 à 9, **caractérisée en ce que** ledit élément de verrouillage (9) comprend une broche (32) qui est reliée de manière pivotante à la partie de liaison (30) entre lesdites extrémités (30a, 30b), ledit élément de préhension (15) comprenant une vis (33) qui peut être vissée dans la broche (32) pour déplacer ladite broche le long dudit axe central (V).
11. Hotte (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce qu'**elle comprend une pluralité desdits éléments de verrouillage (9) situés sur les deux dits côtés opposés (3a) dudit cadre (2).
12. Hotte (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce qu'**elle comprend deux desdits éléments de verrouillage (9) situés sur le même côté (3a) dudit cadre (2).

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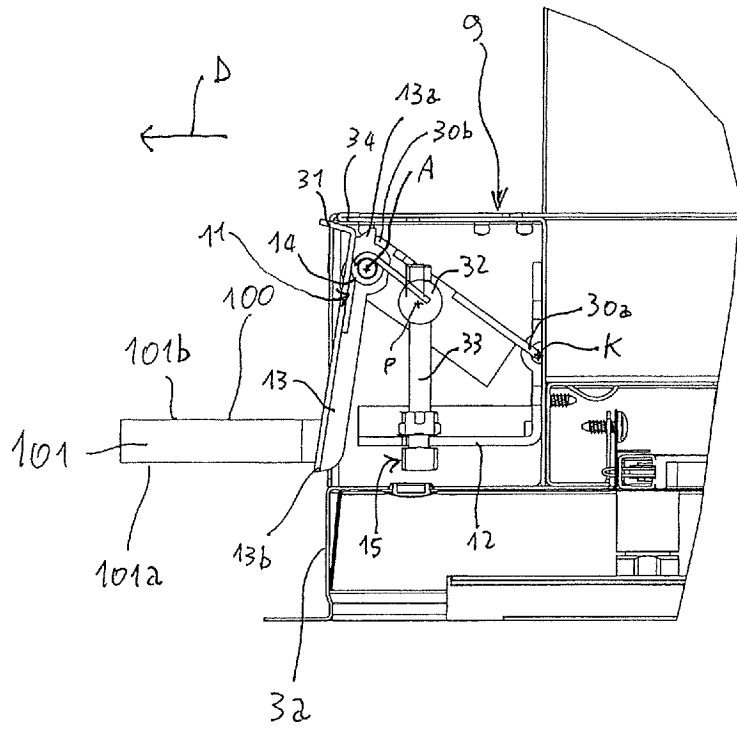
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Fig. 5



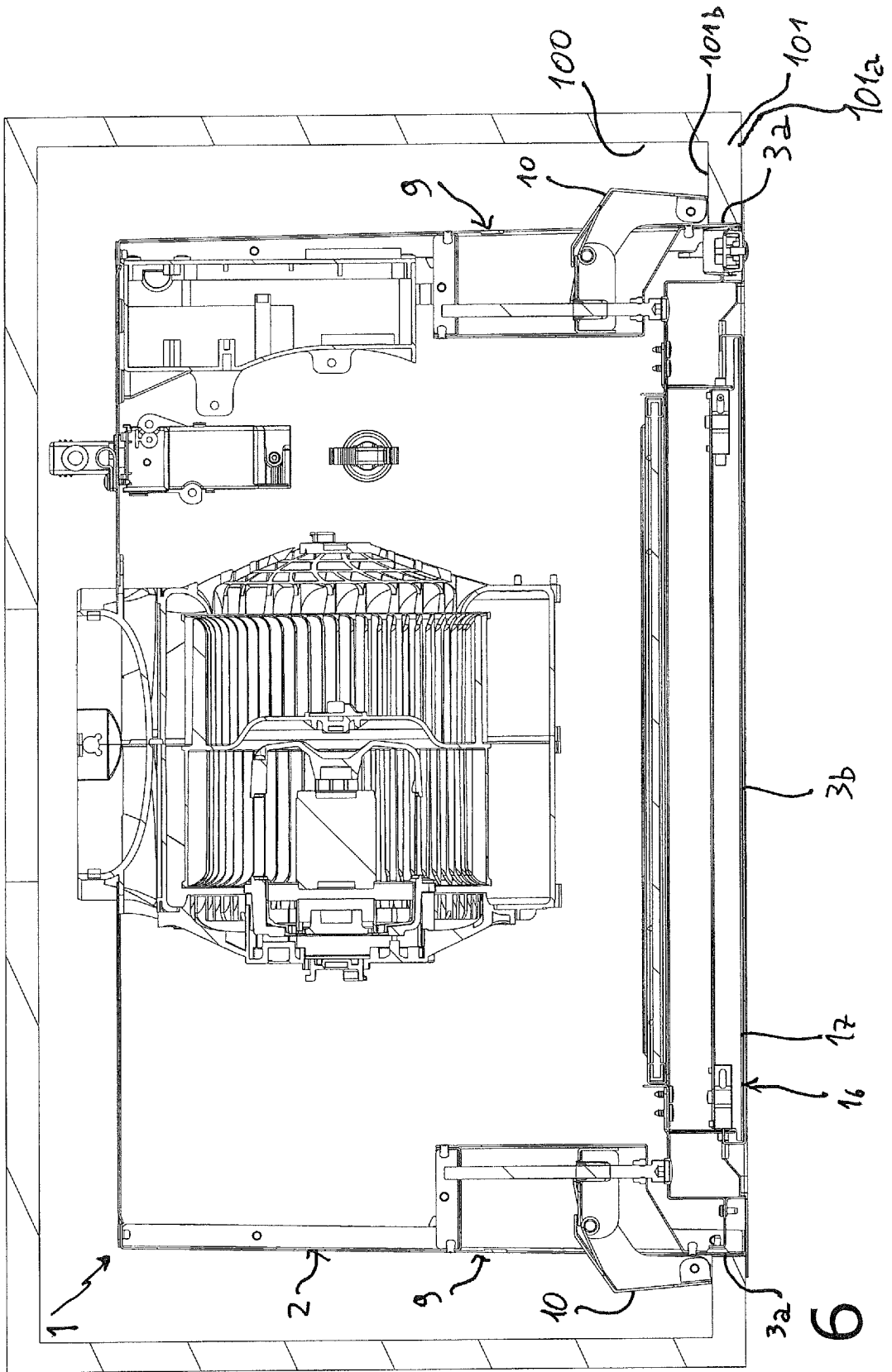


Fig. 6

Fig. 7

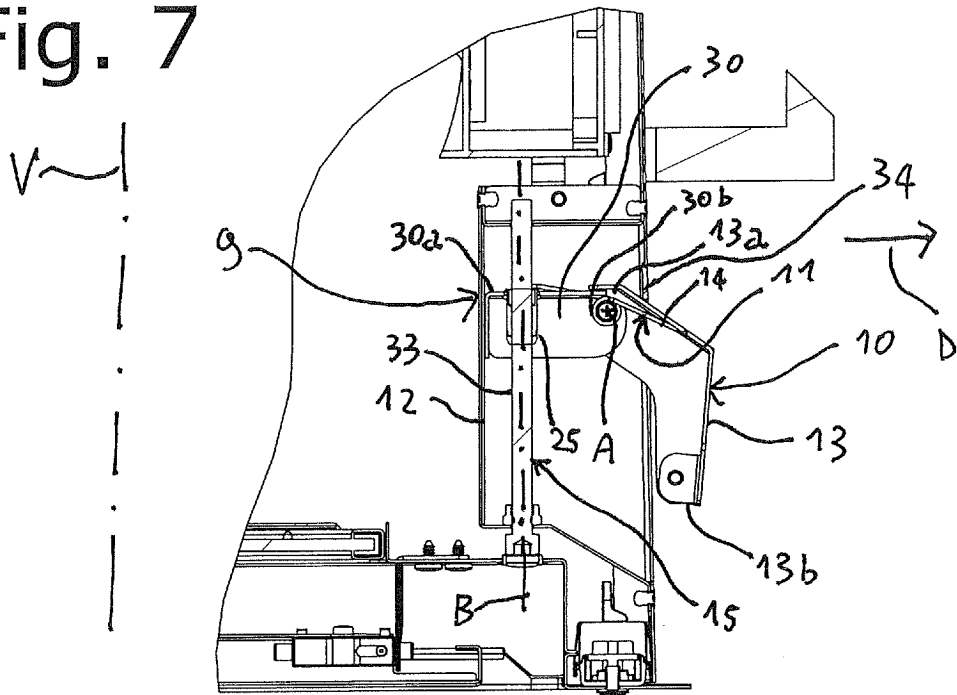


Fig. 8

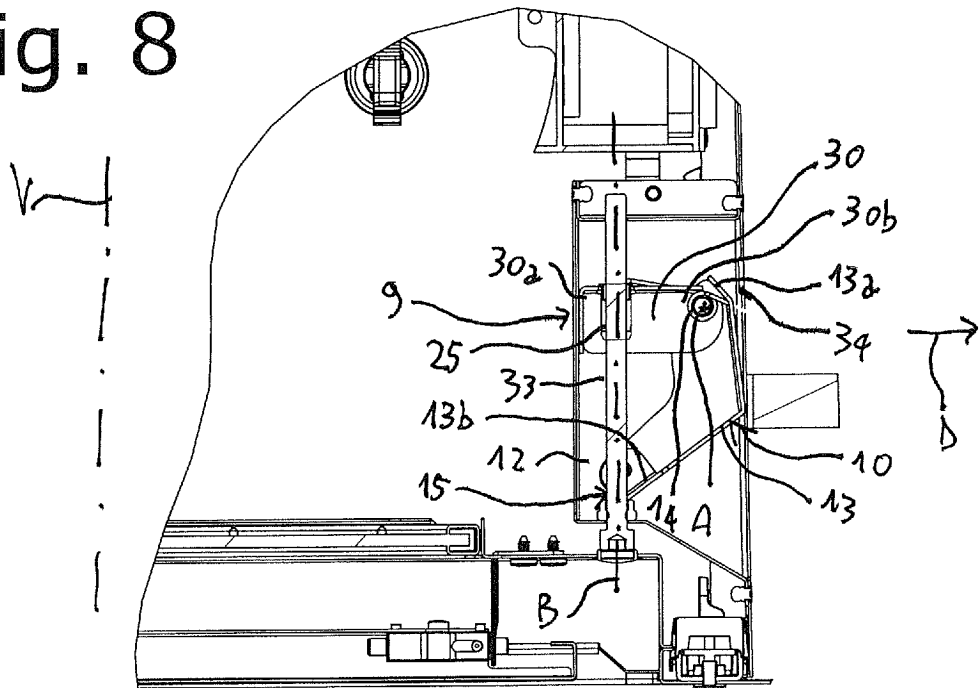


Fig. 9

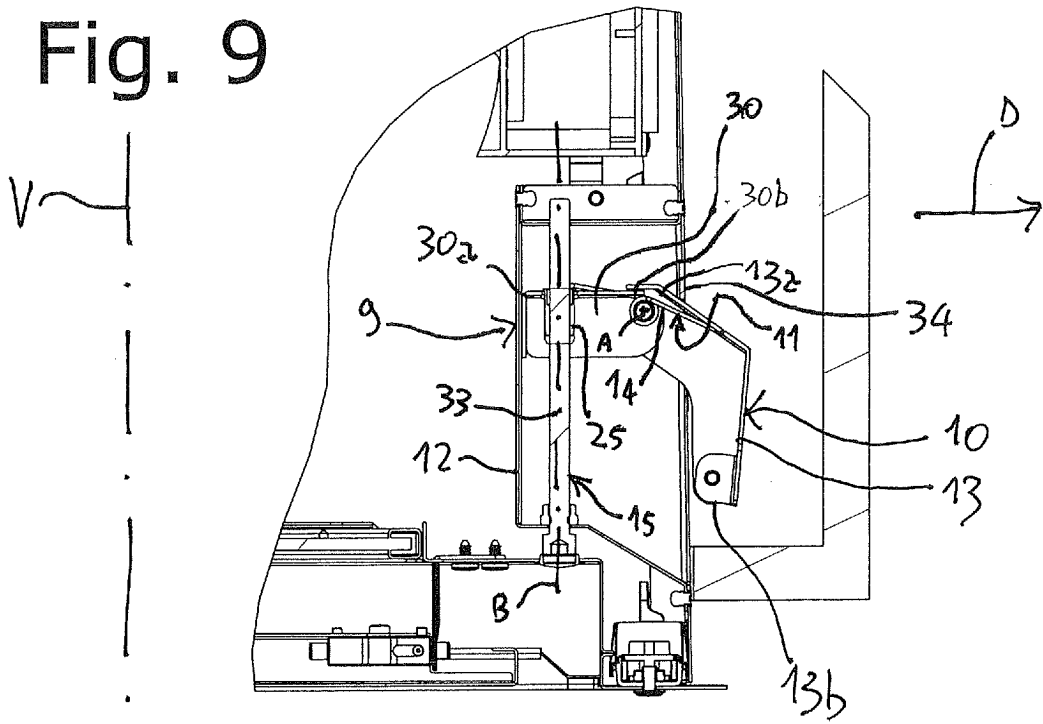
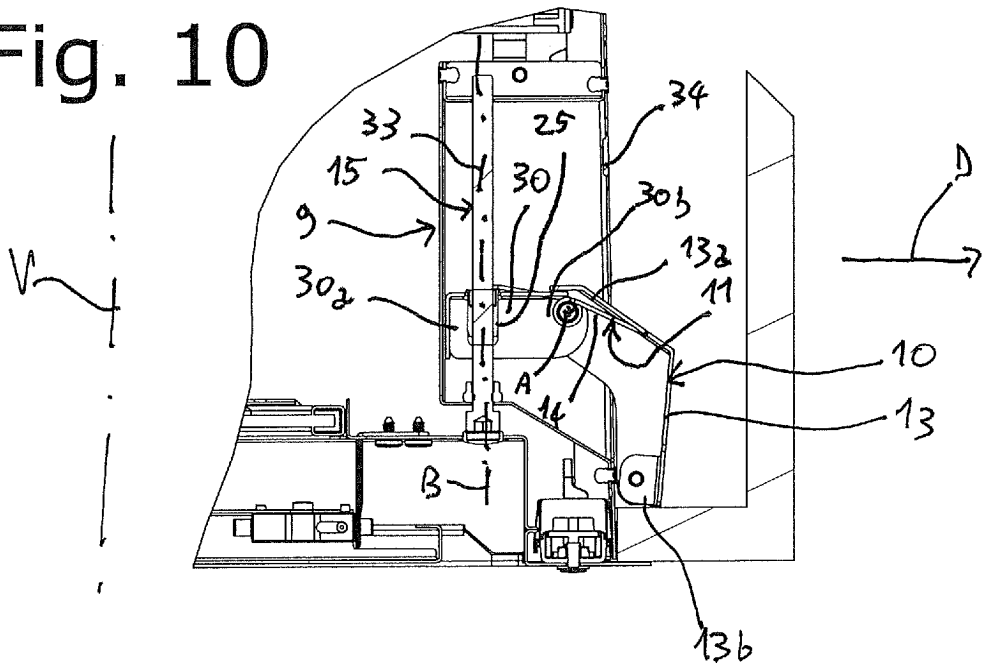


Fig. 10



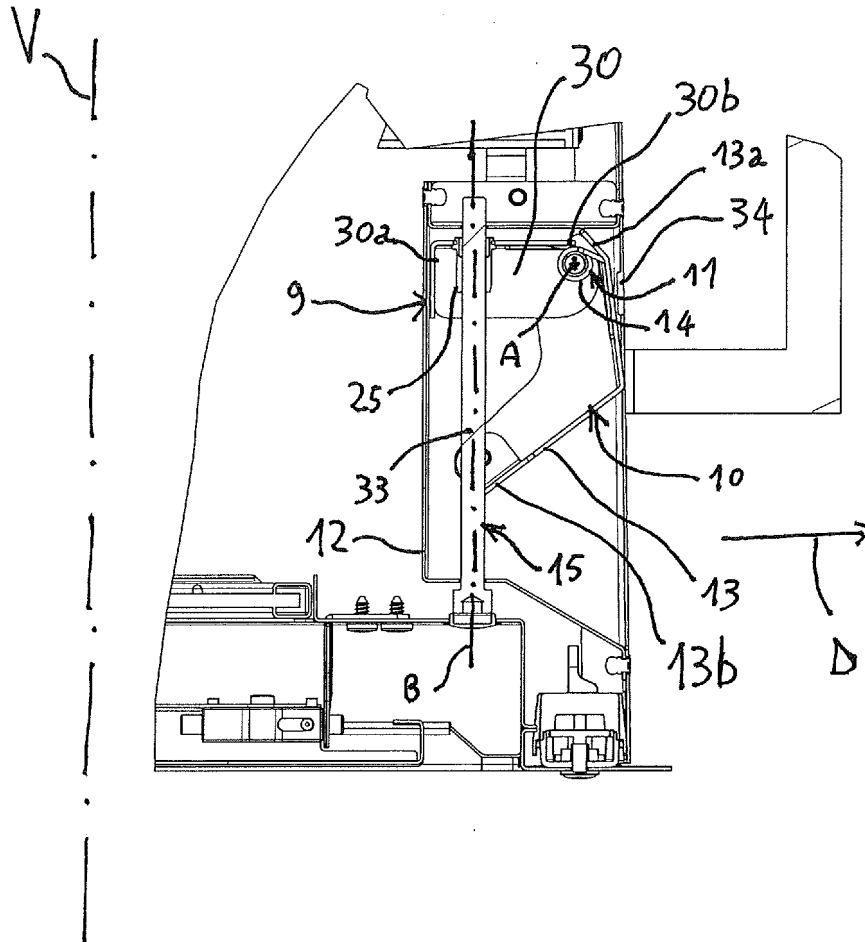


Fig. 11

REFERENCES CITED IN THE DESCRIPTION

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