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(54) **STRIKER FOR A LOCK AND INSTALLATION METHOD THEREOF**

SCHLIESSBLECH FÜR EIN SCHLOSS UND INSTALLATIONSVERFAHREN DAFÜR

GÂCHE POUR UNE SERRURE ET SON PROCÉDÉ D'INSTALLATION

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(56) References cited:

EP-A1- 0 801 191 FR-A3- 2 965 001

JP-U- H03 101 775 US-A- 3 241 873

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Description

[0001] The invention falls within the technical field of door and window locks and relates to a striker for a lock and an installation method thereof.

[0002] In technical jargon, the term "striker" identifies the component that is installed in a cavity fashioned, in general, in the the fixed frame of a door or window and which is suitable for receiving the locking members of the lock, for example a latch or a bolt or a hook-bolt.

[0003] As is well known, the latch, bolt or another member is engaged in the striker when the door or window leaf on which the lock is installed is in the closed position, i.e. when it is substantially aligned with the fixed frame.

PRIOR ART

[0004] In accordance with the prior art, a striker for a lock comprises a receiving body having a housing suitable for receiving a locking member of the lock. Generally, a striking plate is installed on the fixed frame in such a way that a through opening thereof is positioned so as to coincide with an access opening of the cavity in which the striker is inserted. In greater detail, the through opening of the striking plate is aligned with the aforesaid housing of the receiving body.

[0005] The purpose of the striking plate is to reinforce the fixed frame to make the lock more secure, and further to cover any imperfections due to the cutting operation necessary to obtain the cavity. In addition, the striking plate defines an abutment surface for the latch when the door or window leaf is closed.

[0006] Generally, the receiving body is shaped like a tray and has dimensions such as to fit into the cavity fashioned in the fixed frame, so that a base wall of the tray is disposed in a position facing and in proximity to a bottom wall of the cavity.

[0007] In accordance with the prior art, the striker comprises a pair of retaining elements made of elastically flexible material, typically plastic; the function of the retaining elements is to enable the insertion of the receiving body inside the cavity and, once said body has been inserted, to prevent the extraction thereof. For this purpose, each retaining element has an inclined portion which defines a lead-in suitable for enabling the insertion of the receiving body into the cavity and a tooth that opposes an edge of the striking plate to prevent the receiving body from slipping out of the cavity. More precisely, when the striker starts to be inserted into the cavity, the inclined lead-in portions, protruding relative to the area occupied by the receiving body, come into contact with the striking plate, which forces the retaining elements to bend towards the inside of the housing of the receiving body. Once the striker has been inserted all the way into the cavity, i.e. when the base wall of the receiving body is disposed in proximity to the bottom wall of the cavity, the retaining elements have enough space to go back into an unbent position, so that each tooth opposes an edge

of the striking plate, thereby preventing the striker from slipping out of the striking plate and thus being extracted from the cavity.

[0008] A particularly felt need in the art is to be able to extract the striker rapidly, so as to be able to replace or adjust it based on the size of the cavity. In this latter regard, in fact, so-called reversible strikers are known, which are asymmetrical relative to a transversal plane thereof and can thus be rotated by 180°, so as to compensate for any misalignment between the locking members of the lock and the housing of the receiving body, when the door or window leaf is aligned with the fixed frame. Said misalignments can be caused, for example, by dimensional tolerances or errors arising during the execution of the cavity in the fixed frame. An example of a reversible striker is shown in document EP2248968 in the name of the same Applicant.

[0009] At present, extracting the striker from the cavity necessarily entails removing the striking plate. Disadvantageously, therefore, replacing or adjusting the striker is a laborious operation that requires labour time.

[0010] In order to obviate this problem, it is sometimes attempted to extract the striker by using pointed tools, for example screwdrivers, to avoid removing the striking plate.

[0011] This approach, however, is not devoid of drawbacks.

[0012] First of all, the extraction operation is complicated by the fact that there do not exist suitable tools for extracting the striker from the cavity, in particular by drawing it out through the opening of the striking plate. Secondly, this approach almost always results in a deterioration, and even breakage of the striker or a part thereof, typically the retaining elements. Disadvantageously, moreover, the strikers according to the prior art must always be installed in combination with the striking plate. In the absence of the striking plate it is not possible to maintain the striker inside the cavity in order to extract it if necessary at a later time. If the striker were installed without a striking plate, in fact, it would have to be wedged inside the cavity and would no longer be extractable. In the presence of a striking plate, by contrast, it is possible to extract the striker after removing the striking plate itself, given that each tooth of the retaining elements opposes an edge of the striking plate. As said, however, the presence of the striking plate renders the extraction of the striker more laborious (it is necessary to remove the striking plate) and even impossible (if the striking plate is not removed).

[0013] Another example of prior art locks is contained in document FR 2965001.

[0014] It generally discloses a striker for a lock, comprising:

a receiving body having a housing suitable for receiving a locking member of a lock, said receiving body being insertable into a cavity fashioned on a supporting frame of a door or window; and

at least one retaining element associated with the receiving body and switchable from a release condition, in which the receiving body is insertable in said cavity, and a locking condition, in which said retaining element, after the insertion of the receiving body into the cavity, acts on an engagement portion associated with the supporting frame in such a way as to maintain the receiving body inserted in said cavity.

OBJECTS OF THE INVENTION

[0015] In this context, the technical task at the basis of the present invention is to propose a striker for a lock which overcomes the drawbacks of the above-mentioned prior art. In particular, it is an object of the present invention to provide a striker for a lock that can be rapidly and safely extracted from the cavity.

[0016] Another object of the present invention is to produce a striker for a lock which can be used with and without a striking plate.

[0017] A further object of the present invention is to propose a striker for a lock that is reversible.

[0018] Another object of the present invention is to provide a simplified installation method.

[0019] The stated technical task and specified objects are substantially achieved by a striker for a lock and an installation method thereof, which comprise the technical features disclosed in one or more of the appended claims.

[0020] A striker according to the invention is thereby distinguished from the state of the art at least in that:

- the abutting means is positioned on a portion of the receiving body, which remains exposed when said receiving body is inserted in the cavity,
- the recess of the abutting means is conformed so as to enable the application and transfer of a force in a direction such as to induce an angular shift of the retaining element directed toward the inside of the housing by rotation about an axis passing through a centre of rotation associated with said retaining element, and
- the recess is positioned on a side of the retaining element opposite to the housing.

[0021] The dependent claims correspond to further embodiments of the present invention.

DESCRIPTION OF THE DRAWINGS

[0022] Additional features and advantages of the present invention will become more apparent from the approximate, and thus non-limiting, description of a preferred but not exclusive embodiment of a striker for a lock, as illustrated in the appended drawings, in which:

- figures 1 to 4 illustrate side sectional views of a striker according to the invention, during a step of inserting

a supporting frame into a cavity;

- figures 5 to 8 illustrate side sectional views of the striker shown in figures 1 to 4, during a step of extracting a supporting frame from a cavity;
- figures 9 and 10 illustrate front views of a striker according to the invention, under a condition of use on a supporting frame and wherein the striker shown in figure 9 is rotated by 180° relative to the striker shown in figure 10;
- figures 11 to 14 illustrate side sectional views of a striker according to the invention, during a step of inserting a second type of supporting frame into a cavity;
- figures 15 to 18 illustrate side sectional views of the striker shown in figures 11 to 14, during a step of extracting a second type of supporting frame from a cavity;
- figures 19 and 20 illustrate front views of a striker according to the invention, under a condition of use on a second type of supporting frame and wherein the striker shown in figure 19 is rotated by 180° relative to the striker shown in figure 20.

DETAILED DESCRIPTION OF THE INVENTION

[0023] In accordance with the present invention, the term "striker" identifies the component that is installed in a cavity fashioned, in general, in the fixed frame of a door or window and which is suitable for receiving the locking members of the lock, for example a latch or a bolt or a hook-bolt.

[0024] In particular, the present invention relates to a striker for a lock provided with a means capable of rendering it rapidly and easily extractable from a cavity of a supporting frame.

[0025] Advantageously, a striker according to the present invention can be used both in combination with a striking plate fixed to the fixed frame and directly on the frame, when the latter is made of metallic material. The term "metallic material" must be understood also to include materials made of a metal alloy or coated with metal or a metal alloy.

[0026] The present invention further relates to a method for installing a striker on metal frames which advantageously enables the use of a striking plate to be avoided.

[0027] With particular reference to figures 1 and 11, a striker according to the invention is denoted in its entirety by the number 1.

[0028] In accordance with one aspect of the invention, the striker 1 comprises a receiving body 2 having a housing 2a (which may be seen better in figures 9, 10, 19 and 20) suitable for receiving a locking member (not illustrated) of a lock, for example a latch, a bolt, a hook-bolt or the like. The lock is typically installed on a door or window leaf (not illustrated), according to methods that are known and thus not further described.

[0029] As may be better seen in figures 1, 2, 11 and

12, the receiving body 2 is insertable into a cavity of a supporting frame, for example a fixed strike jamb for a door or window leaf.

[0030] In accordance with one aspect of the invention which may be seen in figures 1 to 10, the frame is indicated with the number 100 and can be made of wood or a structurally similar material; in such a case, the cavity is preferably defined by a hole 101 obtained by removing material, for example by means of a cutting operation.

[0031] According to a variant embodiment illustrated in figures 11 to 20, the frame is indicated with the number 200 and can be made of metal; in such a case, the cavity is defined by an empty space 201 inside the frame.

[0032] With particular reference to figures 4 and 14, the striker 1 comprises at least one retaining element 3 associated with the receiving body 2 and switchable from a release condition (for example figures 2 and 12), in which the receiving body 2 is insertable in the cavity 101, 201, and a locking condition (for example figures 3 and 13), in which the retaining element 3, after the insertion of the receiving body 2 into the cavity 101, 201, acts on an engagement portion 5 associated with the supporting frame 100, 200 in such a way as to maintain the receiving body 2 inserted in the cavity 101, 201.

[0033] In accordance with one aspect of the invention illustrated in figures 1 to 10, the above-mentioned engagement portion 5 consists of an edge of a striking plate 55 fixed onto the frame 100, preferably by means of a pair of screws 65.

[0034] According to an alternative variant embodiment which may be seen in figures 11-20 and wherein the frame 200 is made of metallic material, the above-mentioned engagement portion 5 consists directly of a portion of the frame and preferably an edge of the access opening which delimits the cavity 201. Advantageously, therefore, it is possible to avoid the use of a striking plate, given that it is the frame itself that performs the functions typical of the striking plate. This further aspect will be better described further below in the present description, with reference to an installation method in accordance with the invention.

[0035] According to another aspect of the invention, the retaining element 3 is connected to the receiving body 2, preferably at a base wall 2b of the latter.

[0036] In accordance with a further aspect of the invention, the striker comprises a pair of retaining elements 3 disposed in opposing positions along a longitudinal direction L of extension of the receiving body 2 (figures 9, 10, 19 and 20).

[0037] According to a general concept of the invention, the striker 1 comprises an abutting means 6 for applying and transferring a force on the retaining element 3 to make it switch from the locking condition (for example figures 5 and 15) to the release condition (for example figures 6 and 16), so as to enable the receiving body 2 to be detached from the cavity 101, 201 (for example figures 7 and 17).

[0038] With particular reference to figures 9, 10, 19 and

20, said abutting means 6 is positioned on a portion of the receiving body 2 which remains exposed when said receiving body 2 is inserted in said cavity 101, 201.

[0039] In accordance with a further aspect of the invention, said abutting means 6 comprises at least one recess operatively associated with the retaining element 3 and suitable for cooperating with a tool, for example a tip 300 of a screwdriver (figures 5, 6, 15 and 16). In greater detail, said recess is fashioned on a surface of the receiving body 2 in a position adjacent to the retaining element 3, in such a way as to be at least partially delimited by a portion of the retaining element itself, which may be better seen in figures 4 and 14.

[0040] According to an alternative unillustrated variant embodiment, the abutting means comprises at least one element protruding from the receiving body, for example a tab, operatively associated with the retaining element. In greater detail, the protruding element is solidly connected to the retaining element, so that a force applied on the protruding element is immediately transferred to the retaining element to make it switch from the locking condition to the release condition.

[0041] In accordance with one general and preferred aspect of the invention which may be better seen in figures 8 and 18, the abutting means is conformed so as to enable the application and transfer of a force F1 in a direction such as to induce an angular shift of the retaining element 3 by rotation about an axis passing through a centre of rotation associated with the retaining element itself. In other words, the force F1 causes a mechanical moment having an arm whose length is equal to the distance between the point of application of the force F1 and the above-mentioned centre of rotation. In greater detail, the retaining element 3 is made of flexible material, for example elastomeric material, preferably plastic, and said centre of rotation is defined by a so-called plastic hinge 33 which enables a bending deformation of the retaining element 3 in the direction indicated by the arrow S1, as a result of the application of the force F1 on said abutting means 6. As is well known in mechanics, the term plastic hinge identifies the typical behaviour of materials having a certain elasticity, which permits a relative rotation between the internal cross sections of an object subjected to a mechanical moment.

[0042] According to a further aspect of the invention which may be better seen in figures 6 and 16, the angular shift of the retaining element 3 is directed toward the inside of the housing 2a suitable for receiving the locking member of the lock.

[0043] In accordance with an embodiment better illustrated, for example, in figures 4 and 14, the retaining element 3 has an inclined portion 3a suitable for entering into contact with the above-mentioned engagement portion 5 so as to induce a rotation of the retaining element 3 such as to permit the insertion of the receiving body 2 inside the cavity 101, 201. In addition, the retaining element 3 comprises a tooth 3b suitable, in use, for opposing the above-mentioned engagement portion 5, in order to

maintain the receiving body 2 inserted in the cavity 101, 201.

[0044] With particular reference to figures 3, 4 and 13, 14 and according to a further aspect of the invention, the receiving body 2 comprises a facing edge 22 distal from the tooth 3b in order to delimit an interspace 53, inside which said engagement portion 5 associated with the supporting frame 100, 200 abuts when the receiving body 2 is inserted in the cavity 101, 201.

[0045] In accordance with a further aspect of the invention and with reference to figures 9, 10, 19 and 20, the striker 1 comprises spacer elements 30, 40 of different sizes laterally delimiting the above-mentioned housing 2a so as to define it asymmetrically in the receiving body 2 in such a way that, when said receiving body 2 is inserted in the cavity 101, 201, the spacer elements 30, 40 are resting on side walls of the cavity, so that the housing 2a assumes an unaligned position relative to a longitudinal direction of extension of the cavity. In accordance with this further aspect of the invention, the abutting means 6 is interposed between the spacers 30, 40 and positioned along said longitudinal axis of extension of the cavity. Advantageously, therefore, the abutting means enables a rapid extraction of the striker and an immediate adjustment thereof, by means of a 180° rotation that causes the spacers to exchange positions relative to the cavity, so as to dispose the housing 2° according to a different alignment relative to said longitudinal axis of extension of the cavity.

[0046] With reference to the above-described technical aspects, the functioning of the invention is the following.

[0047] As may be better seen in figures 2, 4, 12 and 14, when the striker 1 starts being inserted inside the cavity 101, 201, the inclined portions 3a of the retaining elements 3, as they protrude relative to the area occupied of the receiving body 2, enter into sliding contact against respective engagement portions 5, be they the edges of a striking plate 55 or parts of the frame 100, 200 at an access opening of the cavity, according to what was previously described.

[0048] The engagement portions 5 force the retaining elements 3 to bend towards the inside of the housing 2a of the receiving body 2 and assume, therefore, said release condition. Once the striker has been inserted all the way into the cavity 101, 201 (for example figures 3 and 13), that is, when the base wall 2b of the receiving body 2 is disposed in proximity to a bottom wall of the cavity 101, 201, the retaining elements 3 have enough space to go back into an unbent position, so that each tooth 3b opposes the engagement portion 5, thereby preventing the extraction of the striker 1 from the cavity 101, 201.

[0049] With reference to figures 5-7 and 15-17, in order to extract the striker from the cavity 101, 201, one acts upon the abutting means 6 so as to bend the retaining elements 3 towards the inside of the housing 2a of the receiving body 2, in such a way as to bring them into said

release condition and thus enable the disengagement of the teeth 3b from the respective engagement portions 5, as may be better seen in figures 8 and 18. In greater detail and with reference to the illustrated examples in which the abutting means 6 is defined by recesses, the functioning of the invention entails inserting tools, for example screwdriver tips 300, inside the recesses and then acting on the latter to bend the retaining elements 3 and thus disengage the teeth 3b so as to uncouple the striker 1 from the striking plate (if present) or frame.

[0050] After the striker 1 has been extracted from the cavity 101, 201, the retaining elements 3 go back into an unbent position and the striker 1 is thus ready to be inserted into the cavity again, possibly after being rotated by 180°, if it is of reversible type, and according to what was previously described.

[0051] In the examples illustrated in figures 1-20, the edge 22 is positioned in a recess fashioned in the striking plate or frame in proximity to the engagement portions 5, so that the striker is installed flush with the striking plate or frame. In accordance with a further global aspect of the invention, and therefore without prejudicing the general nature of the invention, the edge 22 can be on top of the engagement portions of the striking plate or frame, that is, it is not envisaged to make any recess. In such a circumstance, the striker will not be installed flush with the striking plate or frame.

[0052] In further detail and with reference to the example illustrated in figures 11-20, the method for installing a striker for a lock, in accordance with the invention, comprises the following steps:

- preparing a metal frame 200 having a cavity 201;
- fashioning an engagement portion 5 directly on the frame 200 at an access opening of said cavity 201;
- preparing a striker 1 according to the invention and according to what was previously described;
- inserting the receiving body 2 inside the cavity 201 of the frame 200 in such a way that, when the receiving body 2 is in the condition of being inserted in the cavity 201, the retaining element 3 acts directly on said engagement portion 5 of the frame, so that no step of installing a striking plate on the frame 200 is required.

[0053] The method according to the invention thus achieves the important advantage of being able to install the striker inside the cavity of the frame without wedging it in and being able to remove it rapidly and safely, without the use of any striking plate.

[0054] It has been ascertained in practice that the striker and the method according to the invention are capable of achieving the preset objects.

Claims

1. A striker (1) for a lock, comprising:

- a receiving body (2) having a housing (2a) suitable for receiving a locking member of a lock, said receiving body (2) being insertable into a cavity (101, 201) fashioned on a supporting frame (100, 200) of a door or window;
 at least one retaining element (3) associated with the receiving body (2) and switchable from a release condition, in which the receiving body (2) is insertable in said cavity (101, 201), and a locking condition, in which said retaining element (3), after the insertion of the receiving body (2) into the cavity (101, 201), acts on an engagement portion (5) associated with the supporting frame (100, 200) in such a way as to maintain the receiving body (2) inserted in said cavity (101, 201);
 an abutting means (6) for applying and transferring a force on the retaining element (3) to make it switch from the locking condition to the release condition, so as to enable the receiving body (2) to be removed from said cavity (101, 201), said abutting means (6) being positioned on a portion of the receiving body (2), which remains exposed when said receiving body (2) is inserted in the cavity (101, 201), and comprising at least one recess operatively associated with the retaining element (3) and suitable for cooperating with a tool, wherein said recess is fashioned on a surface of the receiving body (2) in a position adjacent to the retaining element (3), in such a way as to be at least partially delimited by a portion of the retaining element (3) itself, said recess being conformed so as to enable the application and transfer of a force (F1) in a direction such as to induce an angular shift (S1) of the retaining element (3) directed toward the inside of the housing (2a) by rotation about an axis passing through a centre of rotation (33) associated with said retaining element (3), wherein said recess is positioned on a side of the retaining element (3) opposite to the housing (2a).
2. The striker (1) according to claim 1, wherein said retaining element (3) is made of flexible material, said centre (33) of rotation being defined by a plastic hinge which enables a bending deformation of the retaining element (3) as a result of the application of a force (F1) on said abutting means (6).
 3. The striker (1) according to any one of the preceding claims, wherein said retaining element (3) has an inclined portion (3a) suitable for entering into contact with said engagement portion (5) so as to induce a rotation of the retaining element (3) such as to permit the insertion of the receiving body (2) inside the cavity (101, 201), said retaining element (3) comprising a tooth (3b) suitable, in use, for opposing said engagement portion (5), in order to maintain the receiving body (2) inserted in said cavity (101, 201).
 4. The striker (1) according to claim 3, wherein said receiving body (2) comprises a facing edge (22) distal from said tooth (3b) in order to delimit an interspace (53), inside which said engagement portion (5) associated with the supporting frame (100, 200) abuts when the receiving body (2) is inserted in said cavity (101, 201).
 5. The striker (1) according to any one of the preceding claims, wherein said retaining element (3) is made of elastomeric material.
 6. The striker (1) according to any one of the preceding claims, comprising a pair of retaining elements (3) disposed in opposing positions along a longitudinal direction (L) of extension of the receiving body (2).
 7. The striker (1) according to any one of the preceding claims, comprising spacer elements (30, 40) laterally delimiting said housing (2a) so as to define it asymmetrically in said receiving body (2) in such a way that, when the receiving body (2) is inserted in the cavity (101, 201), said spacer elements (30, 40) are resting on side walls of said cavity (101, 201), so that said housing (2a) assumes an unaligned position relative to the longitudinal direction of extension of the cavity, said abutting means (6) being interposed between said spacers (30, 40) and being positioned along said longitudinal axis of extension of the cavity (101, 201).
 8. A method for installing a striker for a lock, comprising the following steps:
 - preparing a metal frame (200) having a cavity (201);
 - fashioning an engagement portion (5) directly on the frame (200) at an access opening of said cavity (201);
 - preparing a striker (1) according to any one of the preceding claims 1 to 7;
 - inserting the receiving body (2) of said striker (1) inside said cavity (201) of the frame (200) in such a way that, when the receiving body (2) is in the condition of being inserted in the cavity (201), the retaining element (3) acts directly on said engagement portion (5) of the frame (200), so that no step of installing a striking plate on the frame (200) is required.

Patentansprüche

1. Halter (1) für ein Schloss, umfassend:
 einen Aufnahmekörper (2) mit einem Gehäuse

- (2a), der zum Aufnehmen eines Verriegelungselements eines Schlosses geeignet ist, wobei der Aufnahmekörper (2) in einen Hohlraum (101, 201) einsetzbar ist, der auf einem Tragrahmen (100, 200) einer Tür oder eines Fensters ausgebildet ist;
- mindestens ein Halteelement (3), das dem Aufnahmekörper (2) zugeordnet und von einem Freigabezustand, in dem der Aufnahmekörper (2) in den Hohlraum (101, 201) einsetzbar ist, und einem Verriegelungszustand, in dem das Halteelement (3), nach dem Einsetzen des Aufnahmekörpers (2) in den Hohlraum (101, 201), auf einen Eingriffsabschnitt (5), der dem Tragrahmen (100, 200) zugeordnet ist, in einer derartigen Weise wirkt, dass der Aufnahmekörper (2) in dem Hohlraum (101, 201) eingesetzt gehalten wird, umschaltbar ist;
- ein Anschlagmittel (6) zum Aufbringen und Übertragen einer Kraft auf das Halteelement (3), um es dazu zu bringen, von dem Verriegelungszustand in den Freigabezustand umzuschalten, um es dem Aufnahmekörper (2) zu ermöglichen, aus dem Hohlraum (101, 201) entfernt zu werden, wobei das Anschlagmittel (6) auf einem Abschnitt des Aufnahmekörpers (2) positioniert ist, der freiliegend bleibt, wenn der Aufnahmekörper (2) in den Hohlraum (101, 201) eingesetzt ist, und umfassend mindestens eine Vertiefung, die dem Halteelement (3) wirkzugeordnet und zum Zusammenwirken mit einem Werkzeug geeignet ist, wobei die Vertiefung auf einer Fläche des Aufnahmekörpers (2) in einer Position benachbart zu dem Halteelement (3) in einer derartigen Weise ausgebildet ist, dass sie zumindest teilweise durch einen Abschnitt des Halteelements (3) selbst begrenzt ist, wobei die Vertiefung beschaffen ist, um die Aufbringung und Übertragung einer Kraft (F1) in einer Richtung derart zu ermöglichen, dass eine Winkelverschiebung (S1) des Halteelements (3) induziert wird, die hin zu dem Inneren des Gehäuses (2a) gerichtet ist, durch eine Drehung um eine Achse, die durch ein Drehzentrum (33) verläuft, das dem Halteelement (3) zugeordnet ist, wobei die Vertiefung auf einer Seite des Halteelements (3) gegenüber zu dem Gehäuse (2a) positioniert ist.
2. Halter (1) nach Anspruch 1, wobei das Halteelement (3) aus flexiblem Material hergestellt ist, wobei das Drehzentrum (33) durch ein Kunststoffscharnier definiert ist, das eine Biegeverformung des Halteelements (3) infolge der Aufbringung einer Kraft (F1) auf das Anschlagmittel (6) ermöglicht.
 3. Halter (1) nach einem der vorhergehenden Ansprüche, wobei das Halteelement (3) einen geneigten Abschnitt (3a) aufweist, der zum Inkontakttreten mit dem Eingriffsabschnitt (5) geeignet ist, um eine Drehung des Halteelements (3) zu induzieren, um das Einsetzen des Aufnahmekörpers (2) im Inneren des Hohlraums (101, 201) zu erlauben, wobei das Halteelement (3) einen Zahn (3b) umfasst, der bei der Verwendung zum Entgegenwirken des Eingriffsabschnitts (5) geeignet ist, um den Aufnahmekörper (2) in dem Hohlraum (101, 201) eingesetzt zu halten.
 4. Halter (1) nach Anspruch 3, wobei der Aufnahmekörper (2) einen zugewandten Rand (22) distal von dem Zahn (3b) umfasst, um einen Zwischenraum (53) zu begrenzen, innerhalb dessen der Eingriffsabschnitt (5), der dem Tragrahmen (100, 200) zugeordnet ist, anschlägt, wenn der Aufnahmekörper (2) in dem Hohlraum (101, 201) eingesetzt ist.
 5. Halter (1) nach einem der vorhergehenden Ansprüche, wobei das Halteelement (3) aus Elastomermaterial hergestellt ist.
 6. Halter (1) nach einem der vorhergehenden Ansprüche, umfassend ein Paar von Halteelementen (3), das an gegenüberliegenden Positionen entlang einer Längserstreckungsrichtung (L) des Aufnahmekörpers (2) angeordnet ist.
 7. Halter (1) nach einem der vorhergehenden Ansprüche, umfassend Abstandshalterelemente (30, 40), die das Gehäuse (2a) seitlich begrenzen, um es asymmetrisch in dem Aufnahmekörper (2) in einer derartigen Weise zu definieren, dass, wenn der Aufnahmekörper (2) in dem Hohlraum (101, 201) eingesetzt ist, die Abstandshalterelemente (30, 40) auf Seitenwänden des Hohlraums (101, 201) ruhen, so dass das Gehäuse (2a) eine unausgerichtete Position relativ zu der Längserstreckungsrichtung des Hohlraums annimmt, wobei das Anschlagmittel (6) zwischen den Abstandshaltern (30, 40) zwischengeordnet und entlang der Längserstreckungsachse des Hohlraums (101, 201) positioniert ist.
 8. Verfahren zum Installieren eines Halters für ein Schloss, umfassend die folgenden Schritte:
 - Herstellen eines Metallrahmens (200) mit einem Hohlraum (201);
 - Ausbilden eines Eingriffsabschnitts (5) direkt auf dem Rahmen (200) an einer Zugangsöffnung des Hohlraums (201);
 - Herstellen eines Halters (1) nach einem der vorhergehenden Ansprüche 1 bis 7;
 - Einsetzen des Aufnahmekörpers (2) des Halters (1) im Inneren des Hohlraums (201) des Rahmens (200) in einer derartigen Weise, dass, wenn sich der Aufnahmekörper (2) in dem Zustand befindet, in dem er in den Hohlraum (201) eingesetzt ist, das Halteelement (3) direkt auf

den Eingriffsabschnitt (5) des Rahmens (200) wirkt, sodass kein Schritt zum Installieren eines Schließblechs auf dem Rahmen (200) erforderlich ist.

Revendications

1. Gâche (1) pour une serrure, comprenant :

un corps de réception (2) comportant un logement (2a) apte à recevoir un élément de verrouillage d'une serrure, ledit corps de réception (2) pouvant être inséré dans une cavité (101, 201) ménagée dans un cadre de support (100, 200) d'une porte ou d'une fenêtre ;

au moins un élément de retenue (3) associé au corps de réception (2) et pouvant être commuté depuis un état de libération, dans lequel le corps de réception (2) peut être inséré dans ladite cavité (101, 201), et un état de verrouillage dans lequel ledit élément de retenue (3) agit, après l'insertion du corps de réception (2) dans la cavité (101, 201), sur une partie d'engagement (5) associée au cadre de support (100, 200) de manière à maintenir le corps de réception (2) inséré dans ladite cavité (101, 201) ;

un moyen de butée (6) pour l'application et le transfert d'une force sur l'élément de retenue (3) afin de le faire passer de l'état de verrouillage dans l'état de libération, de manière à ce que le corps de réception (2) puisse être retiré de ladite cavité (101, 201), ledit moyen de butée (6) étant positionné sur une partie du corps de réception (2) qui reste exposée lorsque ledit corps de réception (2) est inséré dans la cavité (101, 201) et comprenant au moins un évidement associé fonctionnellement à l'élément de retenue (3) et apte à coopérer avec un outil, dans lequel ledit évidement est ménagé dans une surface du corps de réception (2) dans une position adjacente à l'élément de retenue (3), de manière à être au moins partiellement délimitée par une partie de l'élément de retenue (3) lui-même, ledit évidement étant conformé de manière à permettre l'application et le transfert d'une force (F1) dans une direction propre à induire un décalage angulaire (S1) du élément de retenue (3) dirigé vers l'intérieur du logement (2a) par rotation sur un axe passant par un centre de rotation (33) associé audit élément de retenue (3), ledit évidement étant positionné sur un côté de l'élément de retenue (3) qui est opposé au logement (2a).

2. Gâche (1) selon la revendication 1, dans lequel ledit élément de retenue (3) est en matériau souple, ledit centre (33) de rotation étant défini par une charnière en matière plastique qui permet une déformation en

flexion de l'élément de retenue (3) à la suite de l'application d'une force (F1) sur ledit moyen de butée (6).

3. Gâche (1) selon l'une quelconque des revendications précédentes, dans lequel ledit élément de retenue (3) a une partie inclinée (3a) apte à entrer en contact avec ladite partie d'engagement (5) de manière à induire une rotation de élément de retenue (3) de façon à permettre l'insertion du corps de réception (2) dans la cavité (101, 201), ledit élément de retenue (3) comprenant une dent (3b) apte, en utilisation, à s'opposer à ladite partie d'engagement (5), afin de maintenir le corps de réception (2) inséré dans ladite cavité (101, 201).

4. Gâche (1) selon la revendication 3, dans lequel ledit corps de réception (2) comprend un bord (22) qui est distal de ladite dent (3b) afin de délimiter un espace intermédiaire (53) à l'intérieur duquel ladite partie d'engagement (5), associée au cadre de support (100, 200), vient en butée lorsque le corps de réception (2) est inséré dans ladite cavité (101, 201) .

5. Gâche (1) selon l'une quelconque des revendications précédentes, dans lequel ledit élément de retenue (3) est en un matériau élastomère.

6. Gâche (1) selon l'une quelconque des revendications précédentes, comprenant une paire d'éléments de retenue (3) disposés dans des positions opposées le long d'une direction longitudinale (L) d'extension du corps de réception (2).

7. Gâche (1) selon l'une quelconque des revendications précédentes, comprenant des éléments d'espacement (30, 40) délimitant latéralement ledit logement (2a) de manière à le définir asymétriquement dans ledit corps de réception (2) de telle sorte que, lorsque le corps de réception (2) est inséré dans la cavité (101, 201), lesdits éléments d'espacement (30, 40) reposent sur des parois latérales de ladite cavité (101, 201), de sorte que ledit logement (2a) prend une position non alignée par rapport à la direction longitudinale d'extension de la cavité, ledit moyen de butée (6) étant interposé entre lesdits espacement (30, 40) et étant positionnés le long dudit axe longitudinal d'extension de la cavité (101, 201).

8. Procédé d'installation d'une gâche pour une serrure, comprenant les étapes suivantes :

- préparer un cadre métallique (200) comportant une cavité (201) ;
- façonner une partie d'engagement (5) directement sur le cadre (200) au niveau d'une ouverture d'accès de ladite cavité (201) ;
- préparer une gâche (1) selon l'une quelconque

des revendications précédentes 1 à 7 ;

- insérer le corps de réception (2) de ladite gâche (1) à l'intérieur de ladite cavité (201) du cadre (200) de telle sorte que, lorsque le corps de réception (2) se trouve dans la condition d'être inséré dans la cavité (201), l'élément de retenue (3) agit directement sur ladite partie d'engagement (5) du cadre (200), de sorte qu'aucune étape d'installation d'une nappe de pêne sur le cadre (200) n'est requise.

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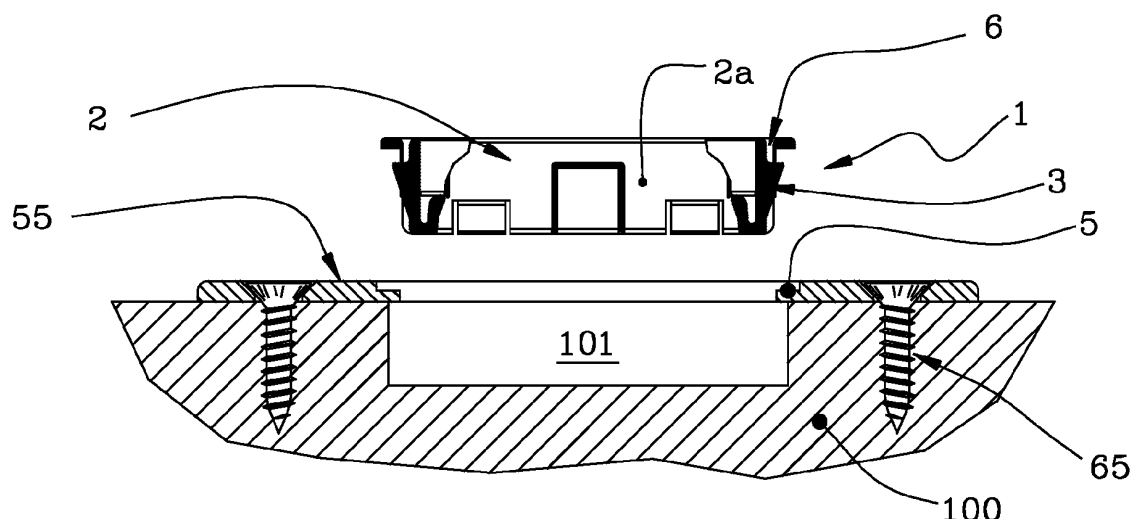


FIG. 1

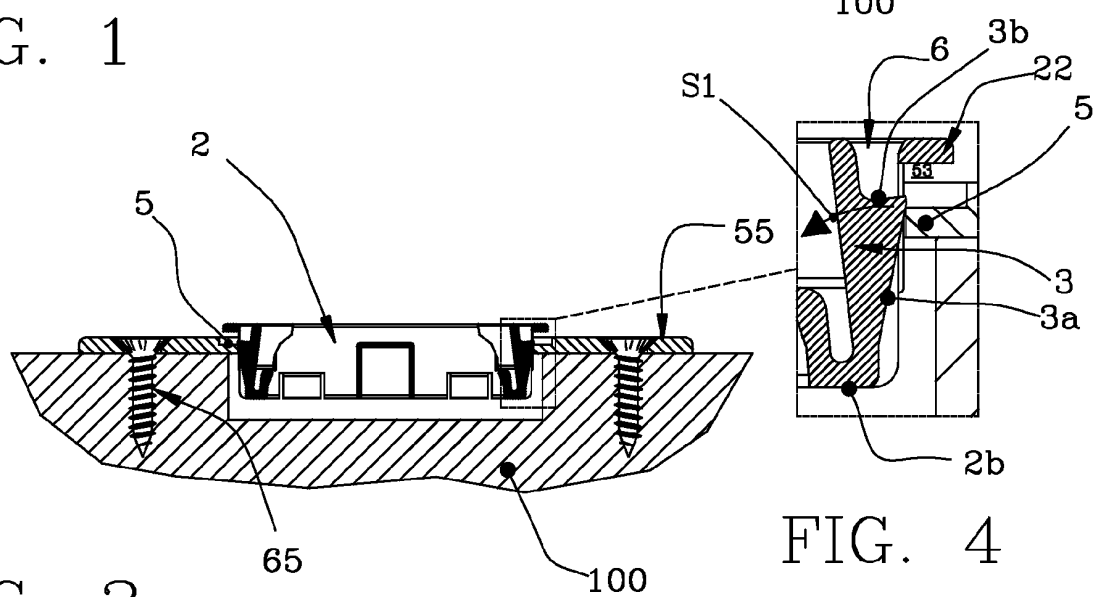


FIG. 2

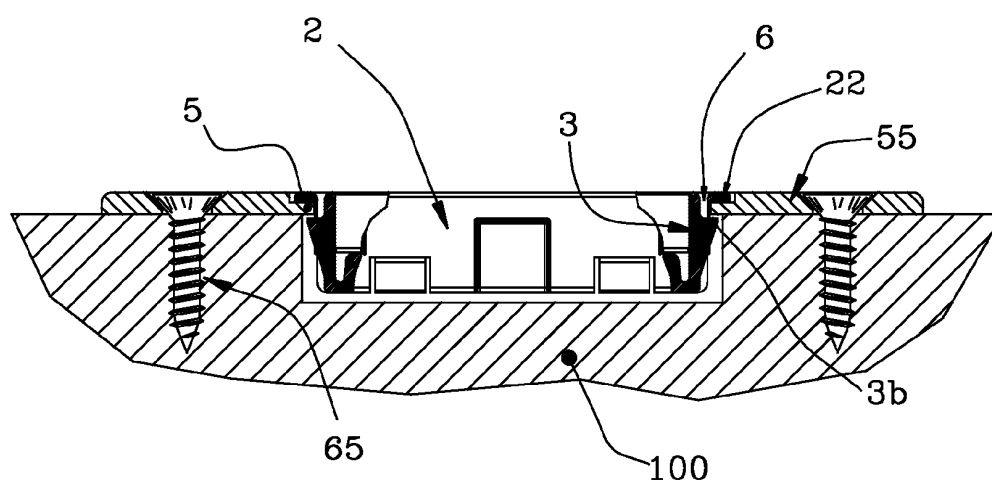


FIG. 3

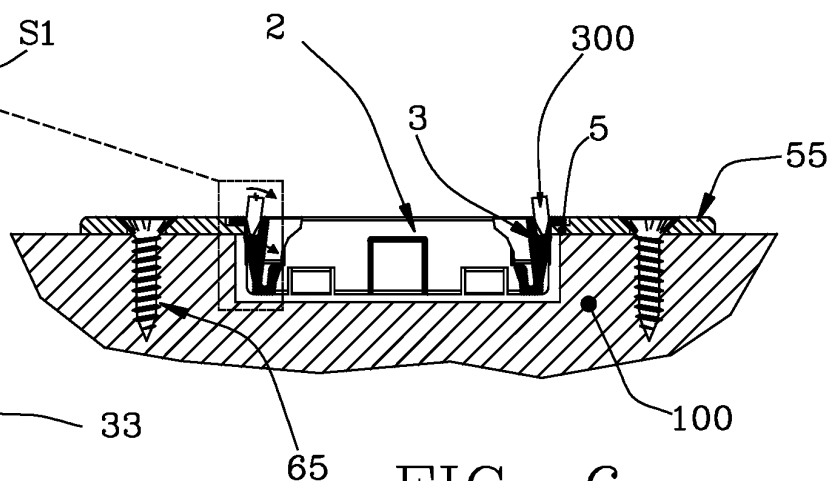
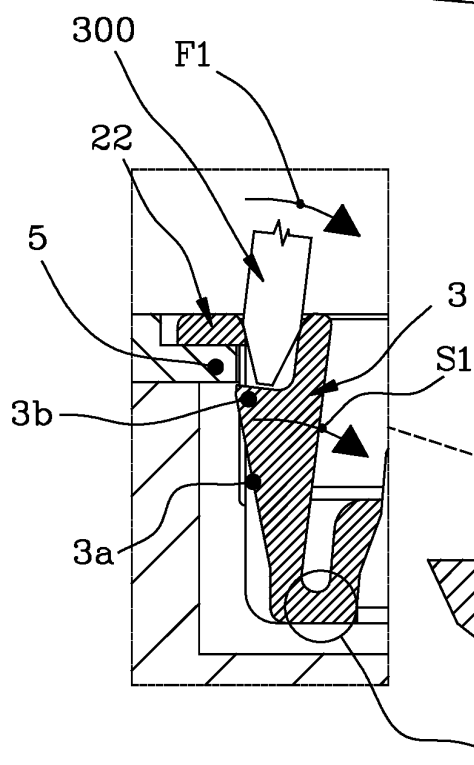
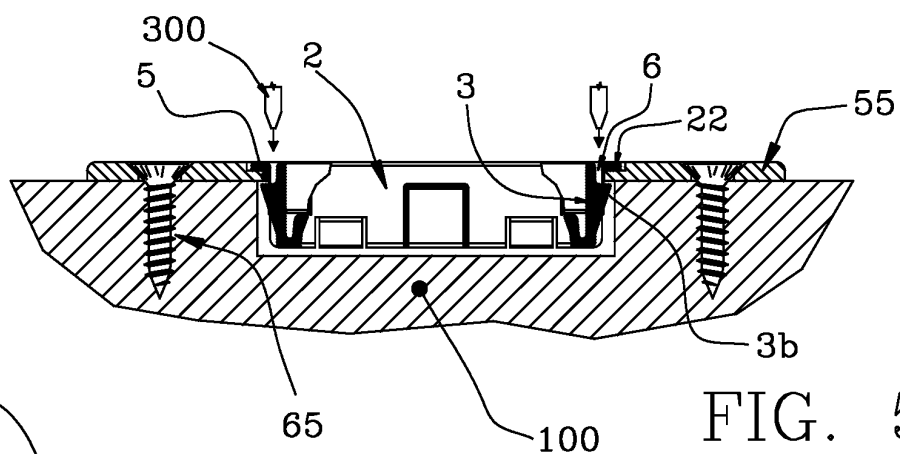


FIG. 8

FIG. 6

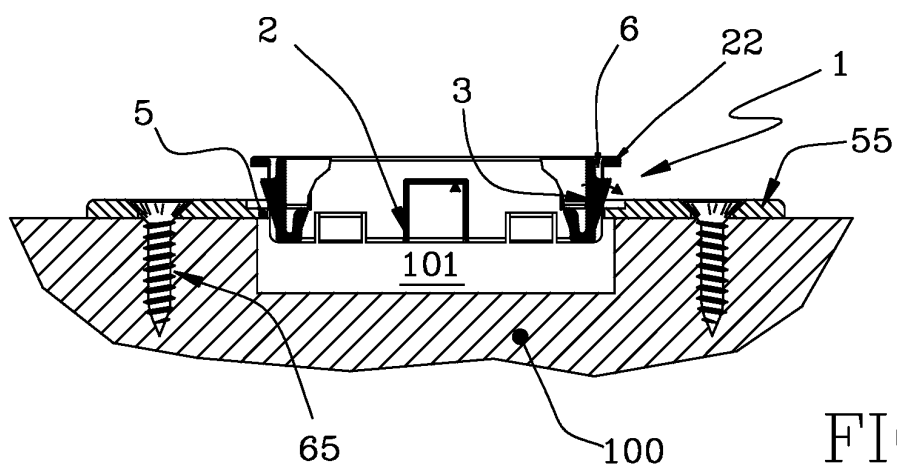
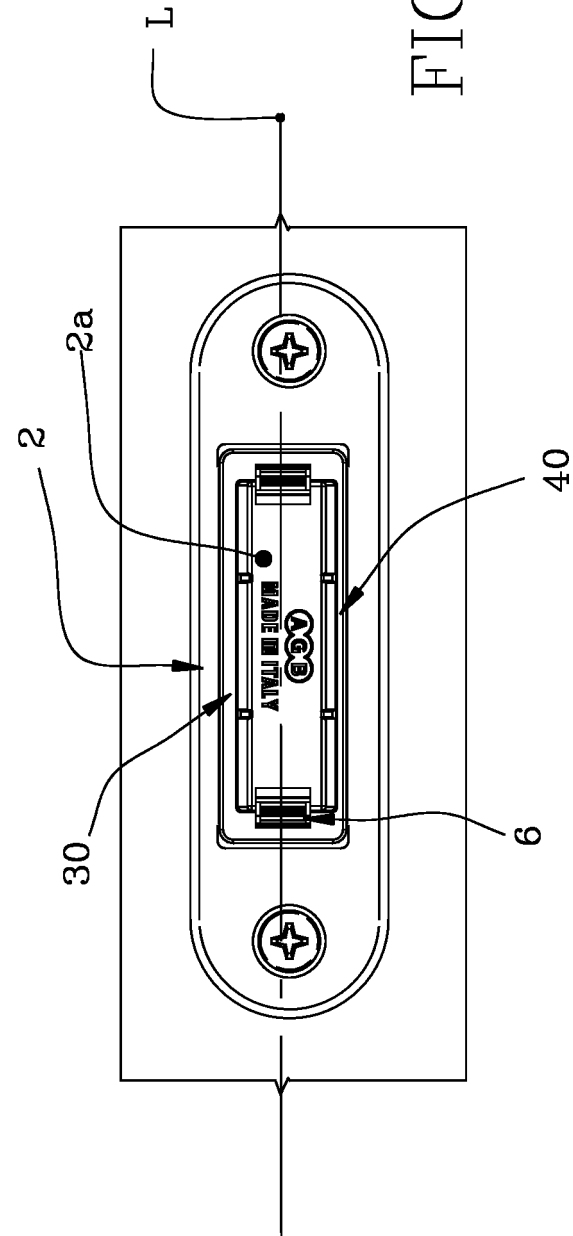
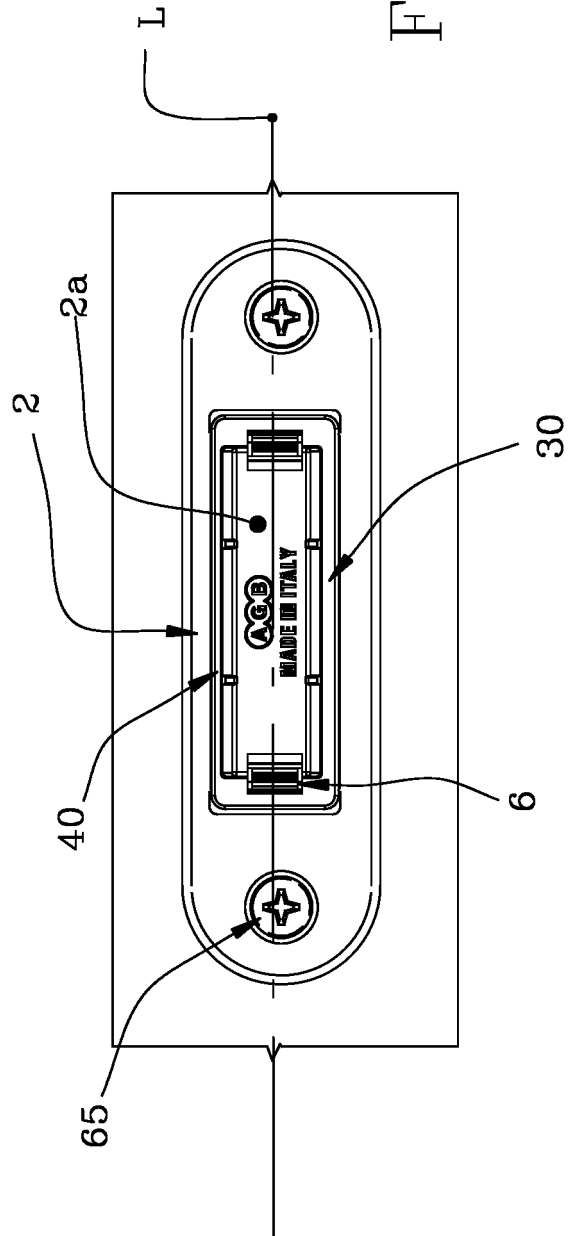


FIG. 7



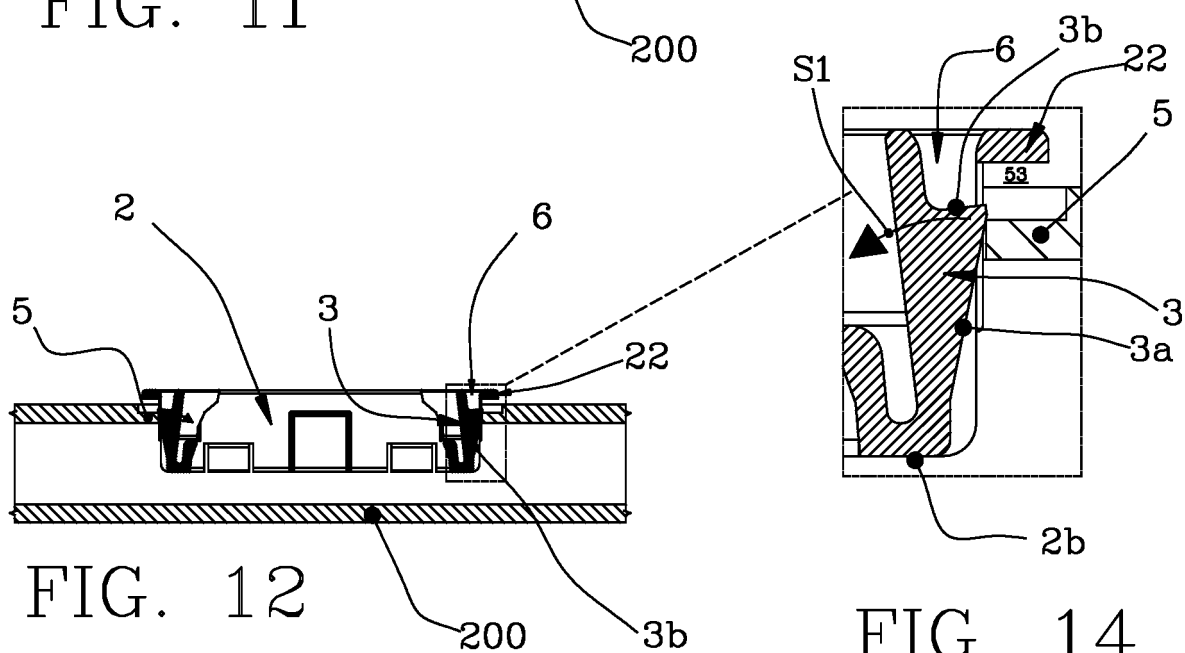
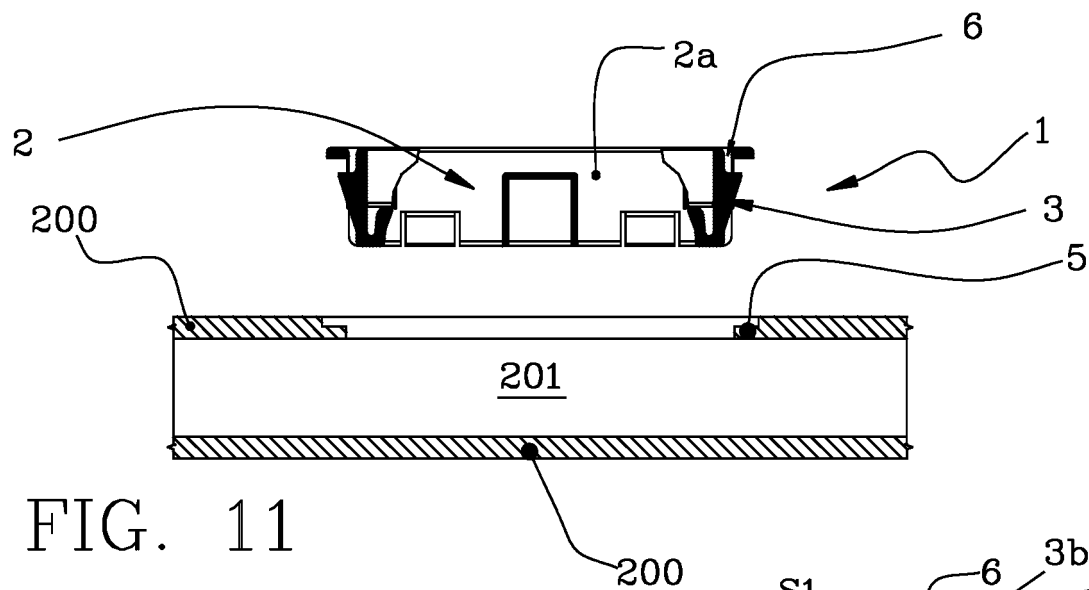
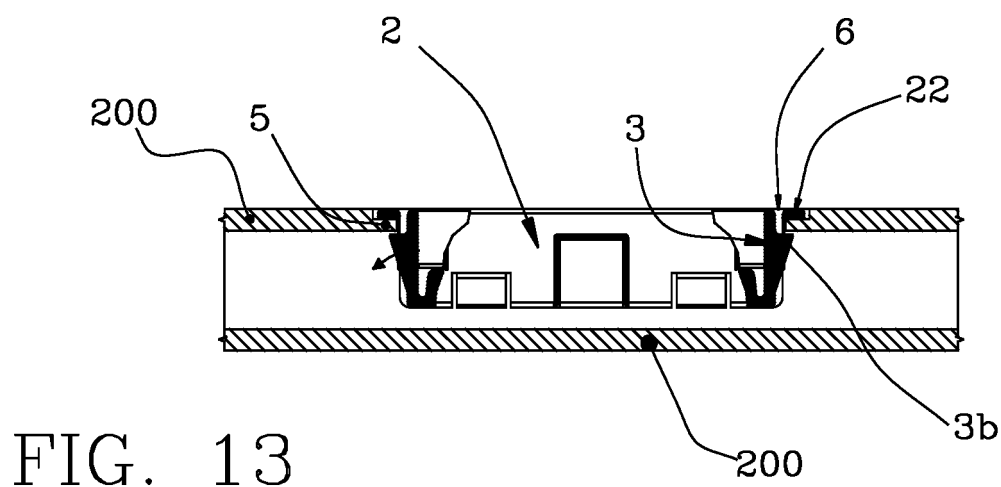
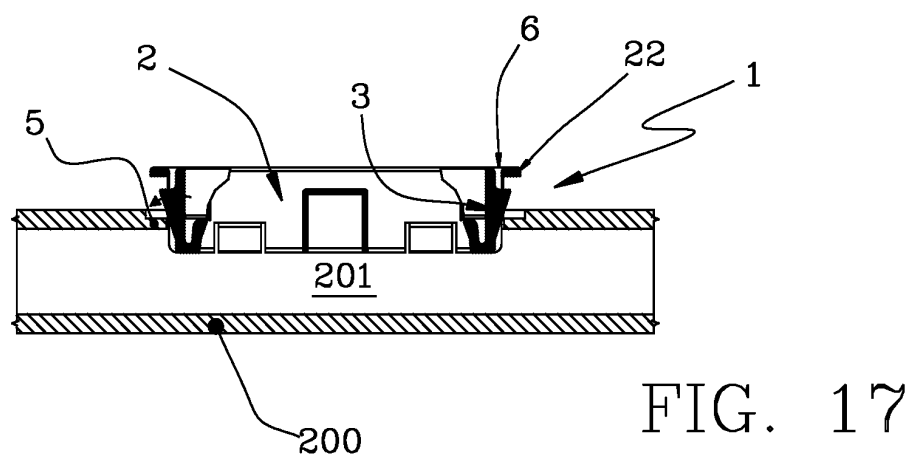
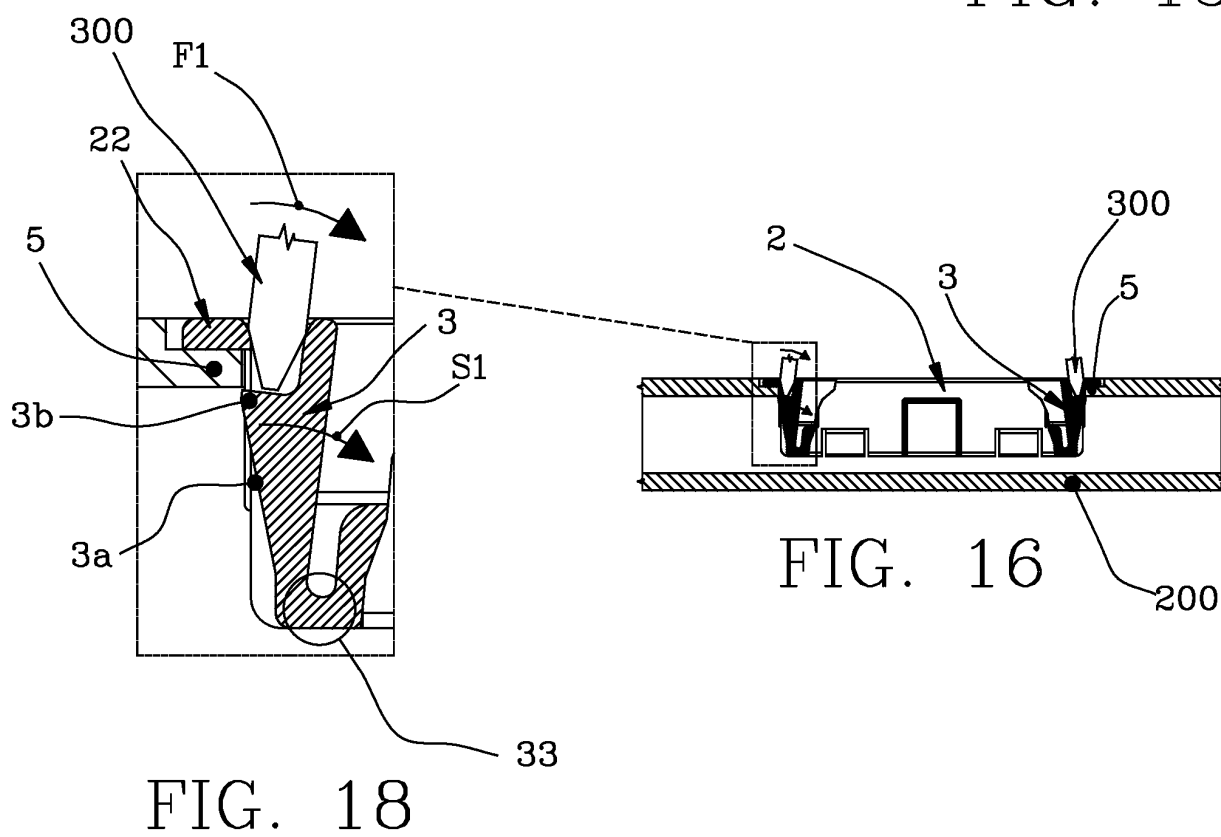
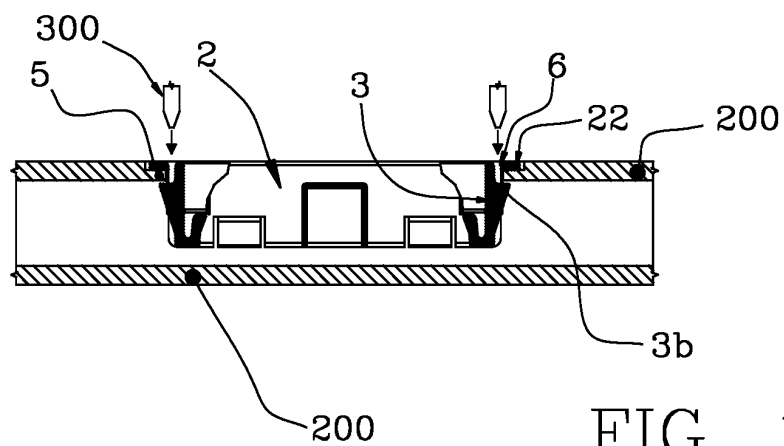
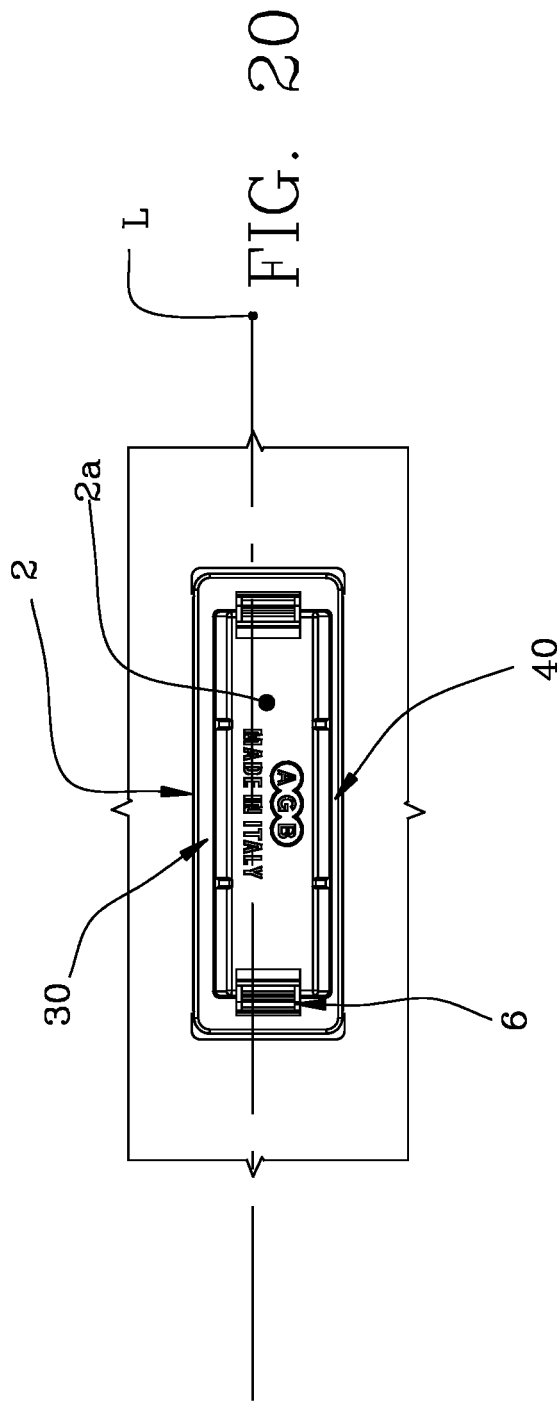
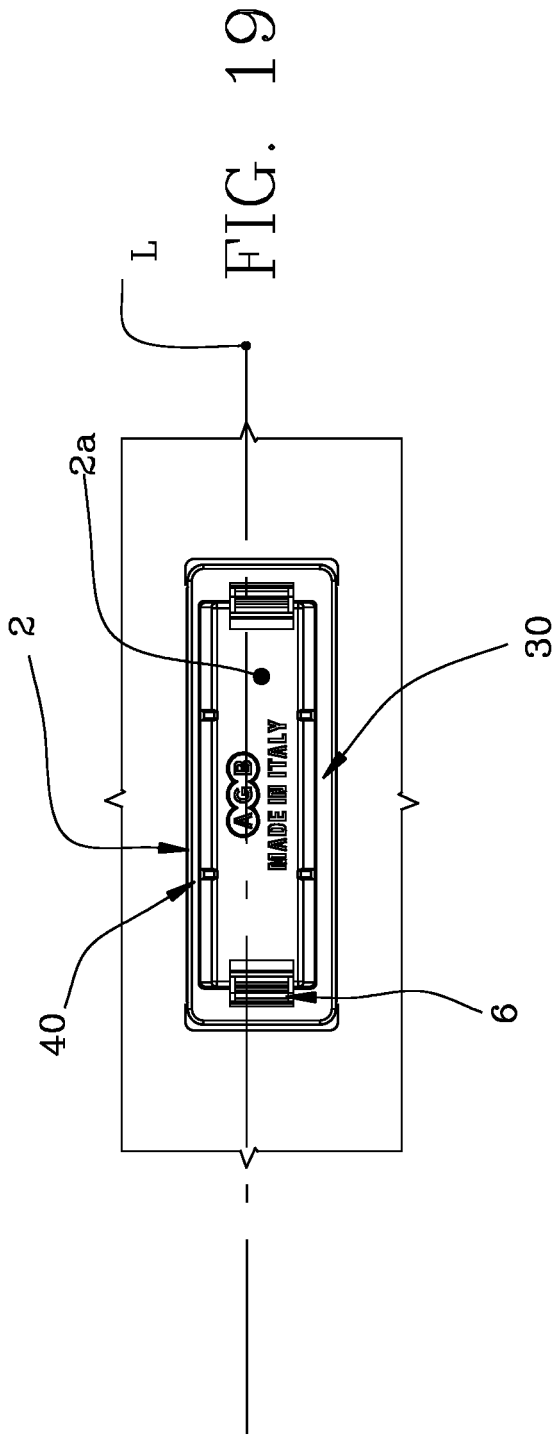


FIG. 14







REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- EP 2248968 A [0008]
- FR 2965001 [0013]