



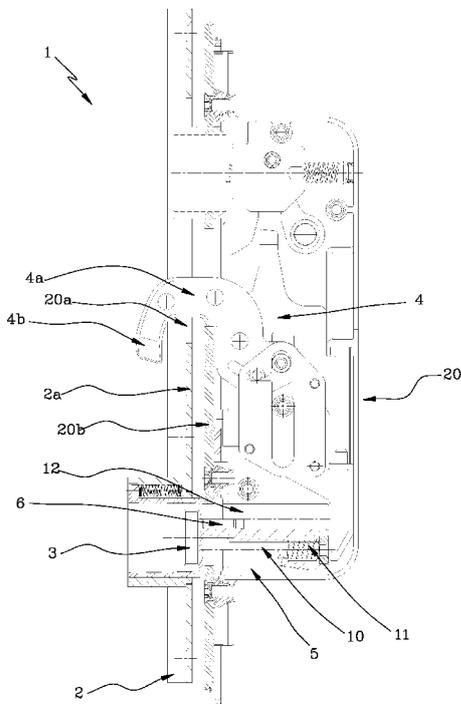
- (51) International Patent Classification:  
E05B 63/20 (2006.01) E05B 47/00 (2006.01)  
E05B 63/00 (2006.01)
- (21) International Application Number:  
PCT/IB2017/050710
- (22) International Filing Date:  
9 February 2017 (09.02.2017)
- (25) Filing Language:  
Italian
- (26) Publication Language:  
English
- (30) Priority Data:  
10201600027216 15 March 2016 (15.03.2016) IT
- (71) Applicant: ALBAN GIACOMO S.p.A. [IT/IT]; Via Alcide De Gasperi, 75, 36060 Romano d'Ezzelino (Vicenza) (IT).
- (72) Inventor: ALBAN, Giacomo Mario; c/o ALBAN GIACOMO S.p.A., Via Alcide De Gasperi, 75, 36060 Romano d'Ezzelino (Vicenza) (IT).

- (74) Agent: LISSANDRINI, Marco; c/o BUGNION S.p.A., Via Pancaldo 68, 37138 Verona (IT).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,

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(54) Title: AUTOMATIC SYSTEM FOR CLOSING WINDOWS OR DOORS

FIG. 1



(57) Abstract: An automatic system (1) for closing windows or doors, comprising a counter-plate (2) installable on a fixed frame and provided with a first member (3) that is mobile with respect to the counter-plate (2). The system further comprises a lock-body (20) installable on a door or window leaf and provided with closing means (4) mobile between a release configuration, in which the closing means (4) engage the counter-plate (20), and a retained configuration, in which the closing means (4) are maintained internally of the lock-body (20) and do not engage the counter-plate (2). A switch (5) is housed in the lock-body (20) for activating a switching of the closing means (4) at least between the retained configuration and the release configuration. The system comprises a second member (6) solidly fixed to the lock-body (20) so that, when the lock-body (20) is proximal to the counter-plate (2), said second member (6) exchanges, with the first member (3), an attraction force of a magnetic type (3) which nears said first member (3) to the lock-body (20) so that it interacts magnetically with the switch (5) for activating the automatic switching of the closing means (4) between the retained configuration and the release configuration, said switch (5) being distinct and separated from said second member (6).

WO 2017/158449 A1

SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG). **Published:**

— with international search report (Art. 21(3))



are aligned, the pressure on the button by the magnet activates the unblocking mechanism, causing release of the bolts and determining the automatic closure of the door or window. The opening of the door or window occurs by action of a recall mechanism, for example a leverage  
5 connected to a handle, which disengages the bolts from the counter-plate. When the door or window leaf is dealigned from the fixed frame, special recall means act on the magnet to cause the magnet to return into the counter-plate; at the same time, said recall means also act on the unblocking mechanism in order to reposition the unblocking mechanism so  
10 that it blocks the bolts in a retained condition internally of the lock-body. In this situation the door or window leaf is distanced from the frame and the door or window is open.

The first prior art application described above has some important drawbacks.

15 Firstly, the presence of an element (the button) projecting from the face-plate of the lock-body compromises the safety of the closing system. In fact, if this element is accidentally or deliberately pushed, it activates the unblocking mechanism and causes release of the bolts, also in the non-aligned condition between the door or window leaf and the frame, with the  
20 consequence that the bolts do not engage in the counter-plate and therefore do not determine the closing of the lock.

Further, this first prior art disadvantageously functions only with the lock bodies having a face-plate made of a ferromagnetic material.

According to a second prior art application, there exist closing systems in  
25 which the unblocking mechanism forms a single part with a first magnet which, when the door or window leaf is aligned to the frame, is attracted by a second magnet housed in the counter-plate and arranged in a facing position to a face-plate of the lock-body. The attraction of the first magnet towards the second magnet determines a displacement of the unblocking  
30 mechanism, causing release of the bolts and determining the automatic closure of the door or window. To enable the release of the bolts, it is

indispensable for the unblocking mechanism to have a displacement run that is sufficient for liberating the release mechanism; therefore, the first magnet is housed in the lock-body in a very retracted position with respect to a face-plate thereof, typically at least at about 4 mm from an external surface thereof.

The second prior art application described above also has some important drawbacks. The distance between the lock-body and the counter-plate is not fixed, but can vary between various doors or windows. In particular, when the distance is at a maximum, a greater force of magnetic attraction is necessary, and therefore magnets having greater power are required; differently, when the distance is at a minimum, the magnets having greater power risk activating the release of the bolts before time, before the door or window leaf is completely aligned to the fixed frame. Therefore, the systems of the second prior art are disadvantageously very difficult to calibrate and can be considerably unreliable.

A further drawback is represented by the fact that, in the presence of face-plates of the lock-body made of a ferromagnetic material, the retracted position of the first magnet compromises the intensity of the reciprocal magnetic force of attraction with the second magnet, owing to the magnetic disturbances induced by the ferromagnetic material of which the face-plate is made. Therefore, these closing systems disadvantageously have a poorly efficient operation with face-plates made of ferromagnetic material.

\* \* \*

## OBJECTS OF THE INVENTION

In this context, the technical task underpinning the present invention is to provide an automatic closing system for windows or doors that obviates the drawbacks of the prior art mentioned above. In particular, an aim of the present invention is to make available an automatic closing system for windows or doors, which is reliable and secure, i.e. able to prevent tampering and accidental exiting of the bolts, or closing points.

A further aim of the present invention is to realise an automatic closing system for windows or doors able to function both with ferromagnetic face-plates or with non-ferromagnetic face-plates.

5 A further aim of the present invention is to make available an automatic closing system for windows or doors which, when the door or window leaf is aligned to the fixed frame, is able to function independently of the distance between the lock-body and the counter-plate.

The technical task set and the objects specified are substantially attained by an automatic closing system for windows or doors, which comprises the  
10 technical characteristics as set out in one or more of the accompanying claims. The dependent claims correspond to further embodiments of the automatic system according to the present invention.

\* \* \*

#### DESCRIPTION OF THE DRAWINGS

15 Further characteristics and advantages of the present invention will become more apparent from the following indicative, and hence non-limiting, description of a preferred, but not exclusive, embodiment of an automatic closing system for windows or doors, as illustrated in the appended drawings, in which:

- 20 - figure 1 illustrates an overview in lateral section of an embodiment of a closing system according to the invention, in an operating condition corresponding to an alignment between the door or window leaf and the fixed frame;
- figure 2 illustrates an overview in lateral section of the closing system of figure 1, in an operating condition corresponding to a  
25 dealignment between the door or window leaf and the fixed frame;
- figures 3A-3G are views in lateral section which illustrate the operation of the closing system shown in figures 1 and 2;
- figures 4A-4B illustrates views in lateral section of an embodiment  
30 of a closing system according to the invention;
- figures 5A-5B illustrate views in lateral section of a further

embodiment;

- figure 6 illustrates a lateral section view of a further embodiment;
- figure 7 illustrates a lateral section view of a further embodiment;
- figure 8 illustrates a lateral section view of a further embodiment;
- 5 - figure 9 illustrates a lateral section view of a further embodiment;
- figure 10 illustrates a lateral section view of a further embodiment.

\* \* \*

#### DETAILED DESCRIPTION OF THE INVENTION

The present invention relates to an automatic closing system for windows  
10 or doors, which activates the release of the closing means following an  
interaction of a magnetic type between a first member, installable on a  
fixed frame, and a switch, installable on a door or window leaf, and  
wherein a first member is neared to the switch by effect of an attraction  
force exerted by a second member.

15 According to the invention, the automatic system comprises a counter-  
plate installable on a fixed frame and provided with a first member that is  
mobile with respect to the counter-plate. Further, a lock-body is present,  
installable on a door or window leaf and provided with closing means  
mobile between a release configuration, in which the closing means  
20 engage the counter-plate, and a retained configuration, in which the  
closing means are maintained internally of the lock-body and do not  
engage the counter-plate.

The system comprises a switch housed in the lock-body for activating a  
switching of the closing means at least between the retained configuration  
25 and the release configuration.

The system further comprises a second member solidly fixed to the lock-  
body so that, when the lock-body is proximal to the counter-plate, said  
second member exchanges, with the first member, an attraction force of a  
magnetic type which nears said first member to the lock-body so that it  
30 interacts magnetically with the switch for activating the automatic switching  
of the closing means between the retained configuration and the release

configuration.

According to an aspect of the invention, the switch is defined by a blocking member slidable between a blocked position, corresponding to the retained configuration of the closing means, and an unblocked position,  
5 corresponding to the release configuration of the closing means.

In a further aspect of the invention the first member, the second member and the blocking member are made of different combinations of material.

For example, the first and the second member can be made of a material magnetic and the blocking member can be made of a ferromagnetic  
10 material.

Alternatively the first member, the second member and the blocking member are made of a magnetic material;

In a further embodiment, the first member is made of a magnetic material, while the second member and the blocking member are made of a  
15 ferromagnetic material.

According to a further example, the first member and the blocking member are made of a magnetic material, while the second member is made of a ferromagnetic material.

Alternatively, the first member is made of a ferromagnetic material, while  
20 the second member and the blocking member are made of a magnetic material.

In a further example, the first and the second member are made of a ferromagnetic material, while the blocking member is made of a magnetic material.

25 The possibility of using various combinations of material advantageously enables the invention to be usable for a wide range of windows and doors. There follow some particular embodiments which derive from the general concept briefly summarised in the foregoing.

With reference to figure 1, an automatic closing system for windows or  
30 doors, according to the invention, is denoted in its entirety by number 1.

The system 1 comprises a counter-plate 2 installable on a fixed frame (not

illustrated) and provided with a first member, preferably a first magnetic member 3, mobile with respect to the counter-plate 2. The magnetic member 3 is preferably defined by a magnet of a permanent type.

According to an aspect of the invention, the counter-plate can be made of  
5 a ferromagnetic material or a non-ferromagnetic material.

With reference to figures 1 and 2, the system 1 comprises a lock-body 20 installable on a door or window (not illustrated) and provided with closing means 4. The closing means 4 are mobile between a release configuration (figure 1), in which the closing means 4 engage the counter-plate 20, and  
10 a retained configuration (figure 2), in which the closing means 4 are maintained internally of the lock-body 20 and do not engage the counter-plate. The closing means preferably comprise a hook 4a which has a hooked portion 4b suitable for engaging a portion 2a of the counter-plate 2.

15 With particular reference to figures 1 and 2, the system 1 comprises a switch 5 housed in the lock-body 20 for activating a switching of the closing means 4 at least between the retained configuration (figure 2) and the release configuration (figure 1).

In a further aspect of the invention, the switch can be housed completely  
20 internally of the lock-body 20. This configuration advantageously prevents accidental activation, or tampering, with the closing system, ensuring the security of the lock.

With reference to figures 1 and 2, the system comprises a second member, preferably a second magnetic member 6, solidly fixed to the lock-  
25 body 20 so that when the lock-body 20 is proximal to the counter-plate 2, said second magnetic member 6 exerts an attraction force on a the first magnetic member 3 so as to near the first magnetic member 3 to the lock-body 20; in this way, the first magnetic member 3 interacts magnetically with the switch 5 for activating the automatic switching of the closing  
30 means 4 between the retained configuration (figure 2) and the release configuration (figure 1). In other terms, when the door or window leaf on

which the lock-body 20 is installed is neared to the fixed frame and aligns therewith to operate the closing of the door or window leaf, the fixed second magnetic member 6 attracts the mobile first magnetic member 3 so as to near it to the switch 5 which, almost simultaneously, activates the  
5 release of the closing means which block the door or window leaf. In a case where the closing means 4 comprise a hook 4, the switch 5 activates the release of the hook 4, which, on crossing an opening 20a of the lock-body 20, hooks the hooked portion 4b thereof to the portion 2a of the counter-plate 2. The second magnetic member 6 is preferably defined by a  
10 magnet of a permanent type.

With reference to figures 1 and 2, the second member 6 is arranged at a front portion 20b of the lock-body 20 destined to face the counter-plate 2.

According to an embodiment variant, the second member 6 can be embedded in the front portion 20b of the lock-body 20 and arranged flush  
15 with an edge surface thereof. Alternatively, the second member is embedded in the front portion of the lock-body, projectingly with respect to an edge surface of the front portion. In this circumstance, the second magnetic member projects by a distance preferably comprised between about 0 mm and about 2 mm.

20 Therefore, the second magnetic member is advantageously arranged on the lock-body in an extremely advanced position. This circumstance advantageously enables obviating the problems of the prior art, and in particular enables eliminating the magnetic disturbances induced by the ferromagnetic material with which the front portion of the lock-body can be  
25 made. Further, and advantageously, as the distance between the two magnetic organs is smaller, they are able to more effectively attract one another, ensuring that the system has a highly reliable operation.

According to an aspect of the invention, the switch 5 is distinct and separated from the second magnetic member 6. This circumstance  
30 advantageously enables optimising both the functioning of the switch and the positioning of the second magnetic member, since the second

magnetic member is most effective in a flush or projecting position with respect to the front portion of the lock-body, while the switch is best housed in the lock-body for reasons of security.

According to a further embodiment of the invention, the switch 5 is defined  
5 by a ferromagnetic member 10, preferably a pin, slidable between a blocked position, slidable between a blocked position, corresponding to the retained configuration of the closing means 4, and an unblocked position, corresponding to the release configuration of said closing means. The ferromagnetic member 10 is preferably associated to an elastic recall  
10 member 11, typically a helical spring, which returns the ferromagnetic member 10 into the blocked condition, when the door or window leaf is dealigned from the frame, according to what will be more fully described in the following paragraphs.

According to a further embodiment of the invention, illustrated, for  
15 example, in figures 1 and 2, the switch 5 and the second magnetic member 6 can be installed on a same support 12. The presence of the support advantageously gives compactness to the closing system and simplifies the maintenance operations, as it is able to remove, with a single operation, both the functional elements of the lock-body, i.e. the switch  
20 and the second magnetic member.

With reference to the embodiment, illustrated in figures 1 and 2 and in greater detail, in figures 3A-3G the first magnetic member 3 is slidingly mobile between a retracted configuration (figures 3A, 3F, 3G) internally of a housing 2b of the counter-plate 2 and an extracted configuration (figures  
25 3B-3E) from said housing, so as to near the switch 5.

According to a further aspect of the invention, the first magnetic member 3, when in the extracted configuration, is preferably in the resting configuration, including indirectly, against an edge surface that is a part of the lock-body, at the switch. By indirect contact it is meant that the first  
30 magnetic member can rest on the edge surface also by means of interpositioning of another member, for example a surface of a containing

tray of the first magnetic member.

According to the invention, the first magnetic member 3 - when in the extracted configuration - is preferably in an indirect resting configuration against the front portion 20b of the lock-body 20 or, as illustrated in figures 5 3A-3G, against the support 12, at the switch 5. In greater detail, the first magnetic member 3 is housed in a tray 35, so that an operating surface 3a of the first magnetic member 3 is in contact with a wall 35a of the tray destined to rest against the front portion of the lock-body 20.

According to a further aspect of the invention, recall means 8 are present 10 for returning the first magnetic member 3 into the retracted configuration internally of the housing 2b, when the lock-body 20 is distanced from the counter-plate 2, i.e. when the door or window leaf is not aligned to the fixed frame. The recall means 8 preferably comprise an elastic element 9. Alternatively, the recall means comprise a ferromagnetic component 15 conformed so as to exert a force of attraction on the first magnetic member of a smaller entity with respect to the force of attraction which the second magnetic member exerts on the first magnetic member, when the lock-body is proximal to the counter-plate. With particular reference to the embodiment illustrated in figure 6, the ferromagnetic component 20 comprises a ferromagnetic pin 14 fixed to a tray 35 that can contain the first magnetic member 3. In a further embodiment illustrated in figure 7, the ferromagnetic component comprises a ferromagnetic case 16 which is a part of the counter-plate 2, or coupled thereto, the first magnetic member 3 being slidably inserted internally of said case. Preferably, the first magnetic 25 member is housed in a tray 35, which is slidably inserted in said ferromagnetic case 16.

With reference to figures 3A-3G, the invention operates as follows.

Figure 3A shows the closing step of the door or window, when however the door or window leaf and the fixed frame are aligned and the lock-body 30 20 is therefore distal to the counter-plate 2. The first magnetic member 3, on the side of the counter-plate 2 (side of the fixed frame), is held in the

retracted configuration by the recall means 8, while on the lock-body 20 side (the door or window leaf side), the switch 5 does not interact with the first magnetic member 3 and maintains the closing means 4 in the retained configuration. In greater detail, in a case in which the switch 5 is defined  
5 by a ferromagnetic element 10 according to what is described in the foregoing, the element is in the blocked position, with an abutment portion 10a thereof defining a travel limit stop for the leverage 13 for activating the closing means 4.

Figure 3B shows the closing step of the door or window, when the door or window leaf and the fixed frame are aligned and the lock-body 20 is  
10 therefore facing the counter-plate 2. The second magnetic member 6 attracts the first magnetic member 3 (arrow A) which assumes the extracted configuration, resting on the front portion of the lock-body 20, at the switch 5. In greater detail, in a case where the support 12 is present,  
15 the second magnetic member 6, in the extracted configuration, rests thereon. During this step, the switch 5 still maintains the closing means 4 in the retained configuration. In greater detail, in a case in which the switch 5 is defined by a ferromagnetic element 10 according to what is described in the foregoing, the element is still in the blocked position, with the  
20 abutment portion 10a thereof defining a travel limit stop for the leverage 13 for activating the closing means 4.

Figure 3C shows the closing step of the door or window, when the door or window leaf and the fixed frame are aligned and the lock-body 20 is  
25 therefore facing the counter-plate 2. With respect to the step described in the foregoing and illustrated in figure 3B, in this step the first magnetic member 3 has interacted with the switch 5 for activating the switching of the closing means 4. In greater detail, in a case in which the switch 5 is defined by a ferromagnetic element 10 according to what is described in the foregoing, the element is in the unblocked position, with the abutment  
30 portion 10a thereof no longer defining a travel limit stop for the leverage 13 for activating the closing means 4. Immediately afterwards, and almost

simultaneously, the closing means automatically switch between the retained configuration, in which they are maintained internally of the lock-body 20, and the release configuration, in which they engage the counter-plate 2. In greater detail, in a case in which the switch 5 is defined by a ferromagnetic element 10 according to what is described in the foregoing, the element is in the unblocked position and therefore the leverage 13 can displace, causing release of the closing means, as illustrated in figure 3D. In other terms, in the case where the closing means 4 comprise a hook 4, the leverage 13 activates the release of the hook 4, which, on crossing an opening 3a of the lock-body 20, hooks the hooked portion 4b thereof to the portion 2a of the counter-plate 2.

Figure 3E shows the opening step of the door or window, when however the door or window leaf and the fixed frame are aligned and the lock-body 20 is therefore facing the counter-plate 2. The closing means 4 are recalled into the retained configuration, for example by movement of a handle (not illustrated) activated by a user or by a key or, otherwise, by an electric motor; the leverage 13 returns to the position it was in prior to the unblocking, i.e. before the switching of the closing means.

Figure 3F shows the opening step of the door or window, when the door or window leaf and the fixed frame are distanced and the lock-body 20 is therefore distal from the counter-plate 2. The first magnetic member 3, on the side of the counter-plate 2 (side of the fixed frame), is moved into the retracted configuration by the recall means 8; consequently, on the lock-body 20 side (the door or window leaf side), the switch 5 no longer interacts with the first magnetic member 3. In greater detail, in a case in which the switch 5 is defined by a ferromagnetic element 10 according to what is described in the foregoing, the element returns into the blocked position, with the abutment portion 10a thereof defining a travel limit stop for the leverage 13 for activating the closing means 4, which are thus maintained in the retained configuration internally of the lock-body 20 (figure 3G).

With reference to a further embodiment, illustrated in figures 4A and 4B, the first magnetic member 3 is rotatably mobile between a retracted configuration (figure 4A) internally of a housing 2b of the counter-plate and an extracted configuration (figure 4B) from said housing, so as to near the  
5 switch 5.

This embodiment advantageously requires a smaller depth of housing.

According to a further aspect of the invention, recall means are present for returning the first magnetic member into the retracted configuration internally of the housing, when the lock-body is distanced from the counter-plate, i.e. when the door or window leaf is not aligned to the fixed  
10 frame. In a possible embodiment illustrated in figure 8, the recall means comprise an elastic element, preferably a helical spring 39. According to an alternative embodiment illustrated in figure 9, said elastic element comprises a torque spring 49. In a further embodiment, the recall means  
15 comprise a ferromagnetic component conformed so as to exert a force of attraction on the first magnetic member of a smaller entity with respect to the force of attraction which the second magnetic member exerts on the first magnetic member, when the lock-body is proximal to the counter-plate. With particular reference to figure 10, the ferromagnetic component  
20 comprises a ferromagnetic pin 34 arranged in a seating 35 of the counter-plate for containing the first magnetic member 3.

According to a further aspect of the invention, an operating surface of the first magnetic member is arranged substantially parallel to an edge surface that is a part of the lock-body.

25 According to the invention, the first magnetic member 3 - when in the extracted configuration - is preferably in an indirect resting configuration against the front portion 20b of the lock-body 20 or, as illustrated in figure 4B, against the support 12, at the switch 5. In greater detail, the first magnetic member 3 is housed in a tray 35, so that an operating surface  
30 S1 of the first magnetic member 3 is in contact, and preferably coplanar, with a wall 35a of the tray destined to rest against the front portion of the

lock-body 20. A flat portion is preferably established between the wall 35a of the tray 35 and the support 12 (or the front portion 20b of the lock-body 20), i.e. the wall 35a is disposed substantially parallel to and in contact with a surface S2 of the support 12 (or with an edge surface of the front  
5 portion 20b of the lock-body 20).

A flat-plane contact advantageously ensures a high level of efficiency of activation of the switch.

Alternatively, the surface S1 of the first member 3 is arranged so as to intersect an edge surface S2 that is a part of the lock-body. According to  
10 the invention, the first magnetic member 3 - when in the extracted configuration - is preferably in an indirect resting configuration against the front portion 20b of the lock-body 20 or, as illustrated in figure 5B, against the support 12, at the switch 5. In greater detail, the first magnetic member 3 is housed in a tray 35, so that an operating surface S1 of the first  
15 magnetic member 3 is coplanar with a wall 35a of the tray destined to rest against the support 12 (or against the front portion of the lock-body 20). An inclined contact is preferably established between the wall 35a of the tray 35 and the support 12 (or the front portion 20b of the lock-body 20), so that the surface S1 of the first magnetic member 3 intersects the surface  
20 S2 of the support 12 (or the front portion 20b).

An inclined contact advantageously simplifies the nearing of the first magnetic member to the switch.

Apart from the fact that the first magnetic member is rotatable, instead of slidable, the functioning principle of the various embodiments of the  
25 invention is the same.

The invention provides further important advantages.

Firstly, the present of the second magnetic member enables the automatic closing system for windows or doors able to function both with ferromagnetic face-plates and with non-ferromagnetic face-plates.

30 Secondly, when the door or window leaf is aligned to the fixed frame, an automatic system according to the invention is able to function

independently of the distance between the lock-body and the counter-plate. In fact, the possibility that the first magnetic member can rest (even indirectly) against an edge surface that is part of the lock-body advantageously ensures that the magnetic interaction distance between  
5 the first magnetic member and the switch is fixed, independently of the geometry of the lock and the installation distance between the window or door and the frame.

**CLAIMS**

1. An automatic system (1) for closing windows or doors, comprising:
  - a counter-plate (2) installable on a fixed frame and provided with a first member (3) that is mobile with respect to the counter-plate (2);
  - 5 - a lock-body (20) installable on a door or window leaf and provided with closing means (4) mobile between a release configuration, in which the closing means (4) engage the counter-plate (2) when the counter-plate (2) is proximal to the lock-body (20), and a retained configuration, in which the closing means (4) are maintained internally of the lock-body (20) and  
10 do not engage the counter-plate (2);
  - a switch (5) housed in the lock-body (20) for activating a switching of the closing means (4) at least between the retained configuration and the release configuration,  
characterised in that it comprises: a second member (6) solidly fixed  
15 to the lock-body (20) so that, when the lock-body (20) is proximal to the counter-plate (2), said second member (6) exchanges, with the first member (3), an attraction force of a magnetic type (3) which nears said first member (3) to the lock-body (20) so that it interacts magnetically with the switch (5) for activating the automatic switching of the closing means  
20 (4) between the retained configuration and the release configuration, said switch (5) being distinct and separate from said second member (6).
2. The system according to claim 1, wherein the second member (6) is arranged at a front portion (20b) of the lock-body (20) destined to face the counter-plate (2).
- 25 3. The system according to claim 2, wherein the second member (6) is embedded in the front portion (20b) of the lock-body (20), flush with an edge surface thereof.
4. The system according to claim 2, wherein the second member (6) is embedded in the front portion (20b) of the lock-body (20), projectingly with  
30 respect to an edge surface of the front portion (20b).
5. The system according to any one of the preceding claims, wherein

the first member (3) is slidably mobile between a retracted configuration internally of a housing (2b) of the counter-plate (2) and an extracted configuration from said housing (2b), so as to near the switch (5).

6. The system according to any one of the preceding claims from 1 to  
5 4, wherein the first member (3) is rotatably mobile between a retracted configuration internally of a housing (2b) of the counter-plate (2) and an extracted configuration from said housing (2b), so as to near the switch (5).

7. The system according to claim 5 or 6, wherein the first member (3),  
10 when in the extracted configuration, is in the resting configuration, including indirectly, against an edge surface that is a part of the lock-body (20), at the switch (5).

8. The system according to claim 7, when dependent on claim 6,  
15 wherein an operating surface (S1) of the first magnetic member (3) is arranged substantially parallel to an edge surface that is a part of the lock-body (20).

9. The system according to claim 7, when dependent on claim 6,  
wherein a surface (S1) of the first member (3) is arranged so as to intersect an edge surface (S2) that is a part of the lock-body.

20 10. The system according to any one of the preceding claims from 5 to 9, comprising recall means (8) for returning the first member (3) into the retracted configuration internally of the housing (2b), when the lock-body (20) is distal from the counter-plate (2).

11. The system according to claim 10, wherein the recall means (8)  
25 comprise an elastic element (9).

12. The system according to claim 10, wherein the recall means (8)  
comprise a component (14) conformed so as to exert a force of attraction on the first member (3) of a smaller entity with respect to the force of attraction which the second member (6) exerts on the first member (3),  
30 when the lock-body (20) is proximal to the counter-plate (2).

13. The system according to any one of the preceding claims from 5 to

12, wherein the switch (5) and the second member (6) are mounted on a same support (12) installed on the lock-body (20).

14. The system according to any one of the preceding claims, wherein the switch (5) is defined by a blocking member (10) that is slidable  
5 between a blocked position, corresponding to the retained configuration of the closing means (4), and an unblocked position, corresponding to the release configuration of the closing means (4).

15. The system according to claim 14, wherein said first member (3), said second member (6) and said blocking member (10) are made of one  
10 of following combinations of materials:

- the first and the second member are made of a magnetic material and the blocking member is made of a ferromagnetic material;
- the first member, the second member and the blocking member are made of a magnetic material;
- 15 - the first member is made of a magnetic material, while the second member and the blocking member are made of a ferromagnetic material;
- the first member and the blocking member are made of a magnetic material, while the second member is made of a ferromagnetic material;
- the first member is made of a ferromagnetic material, while the second  
20 member and the blocking member are made of a magnetic material;
- the first and the second member are made of a ferromagnetic material, while the blocking member is made of a magnetic material.

16. A door or window, characterised in that it comprises an automatic closing system (1) according to any one of the preceding claims.

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FIG. 1

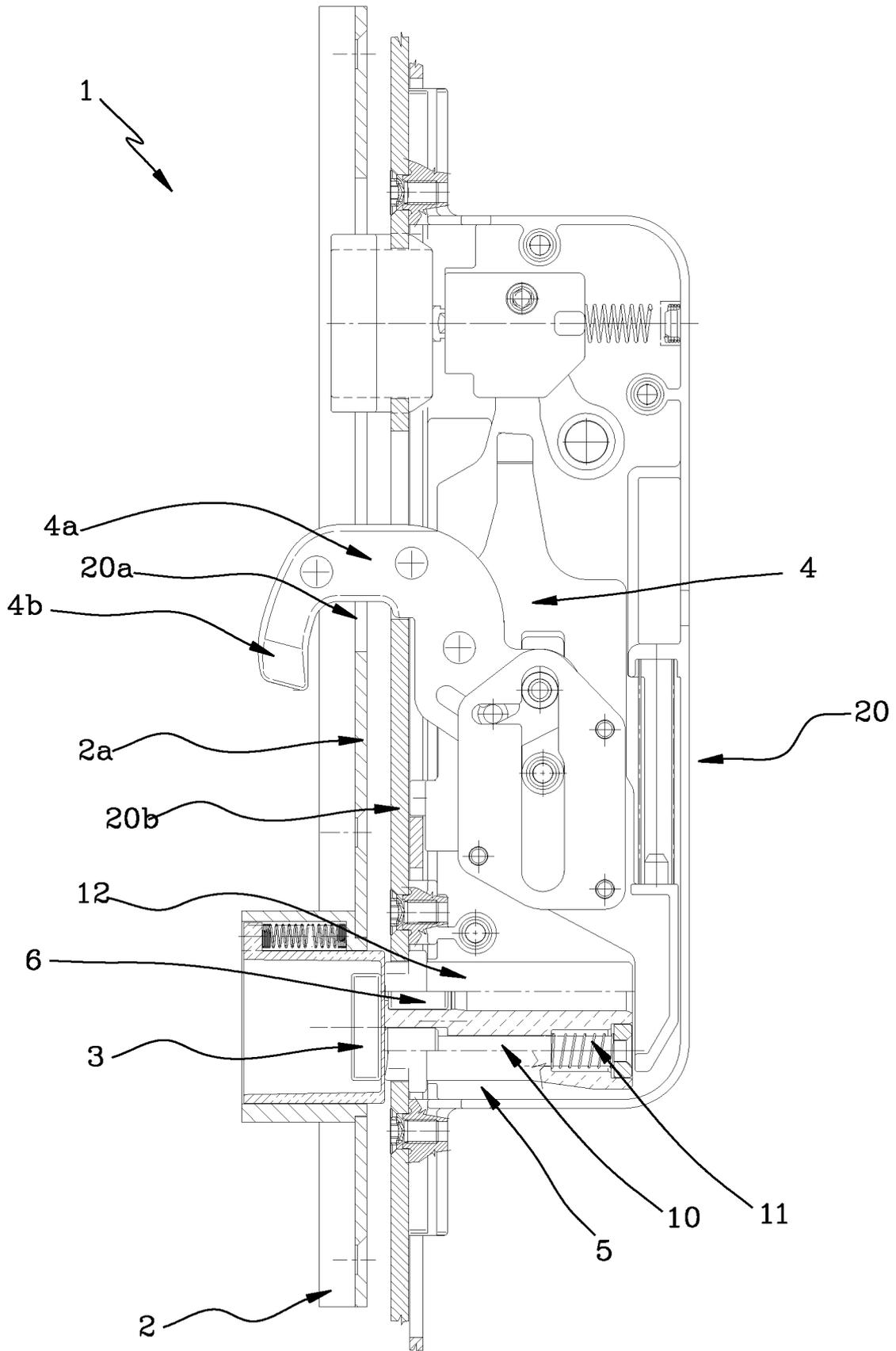
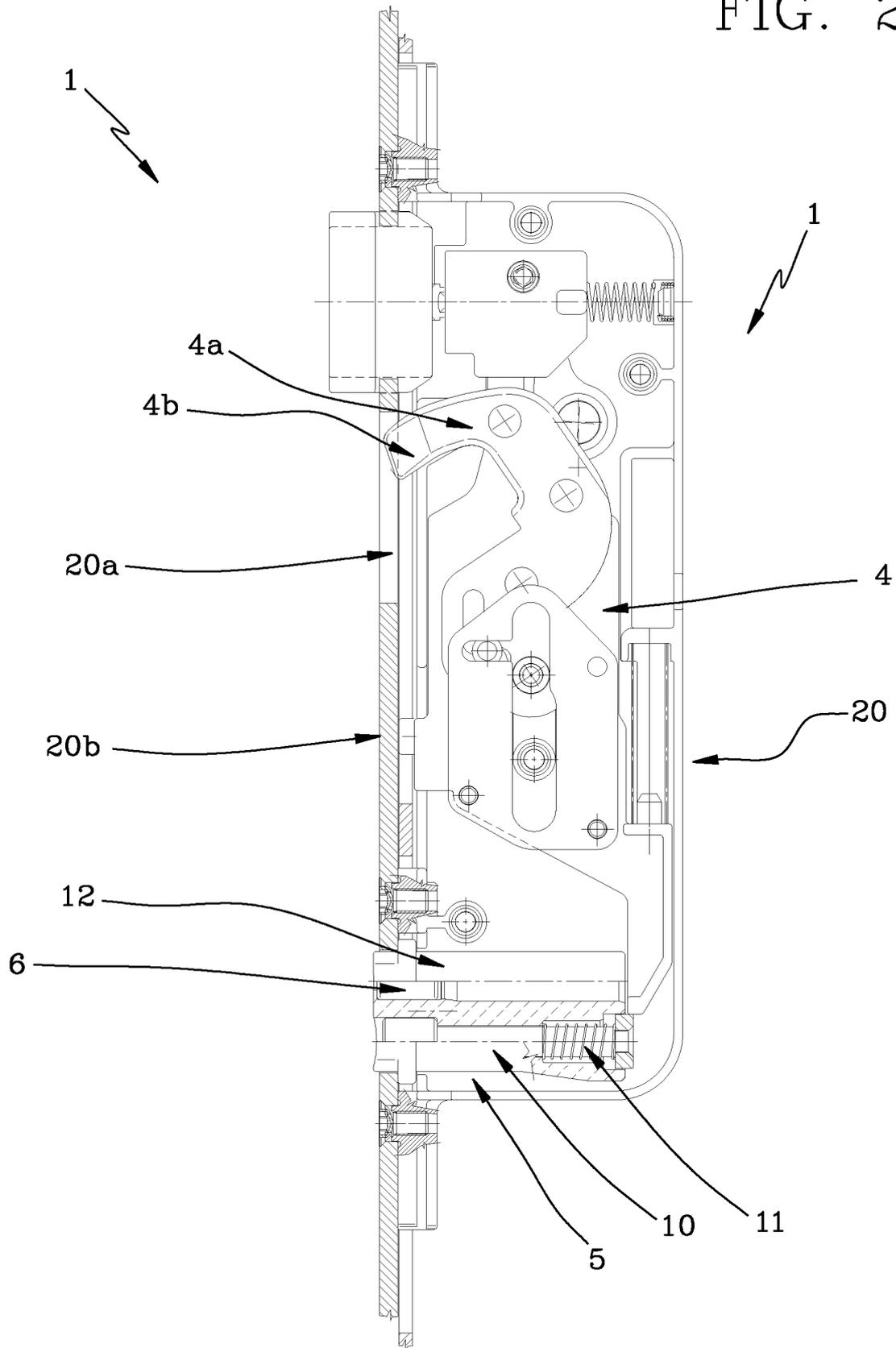
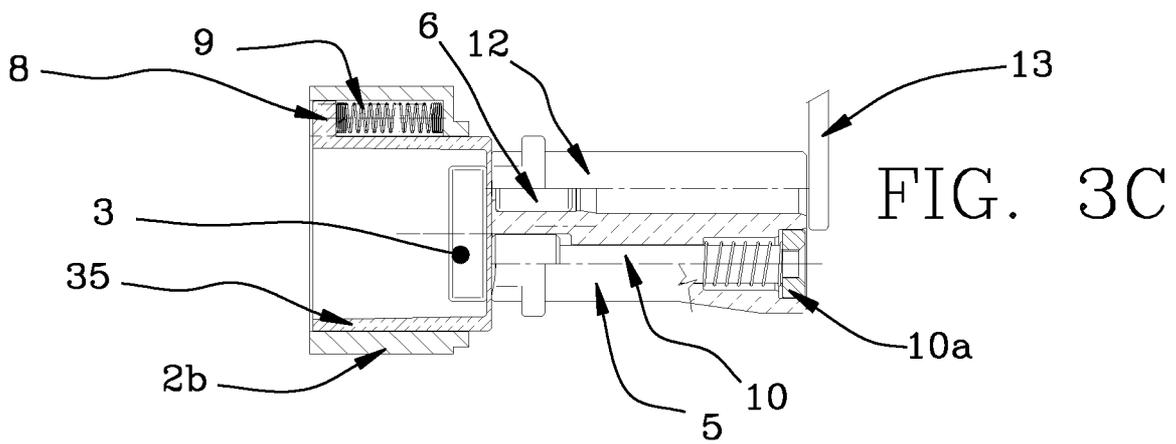
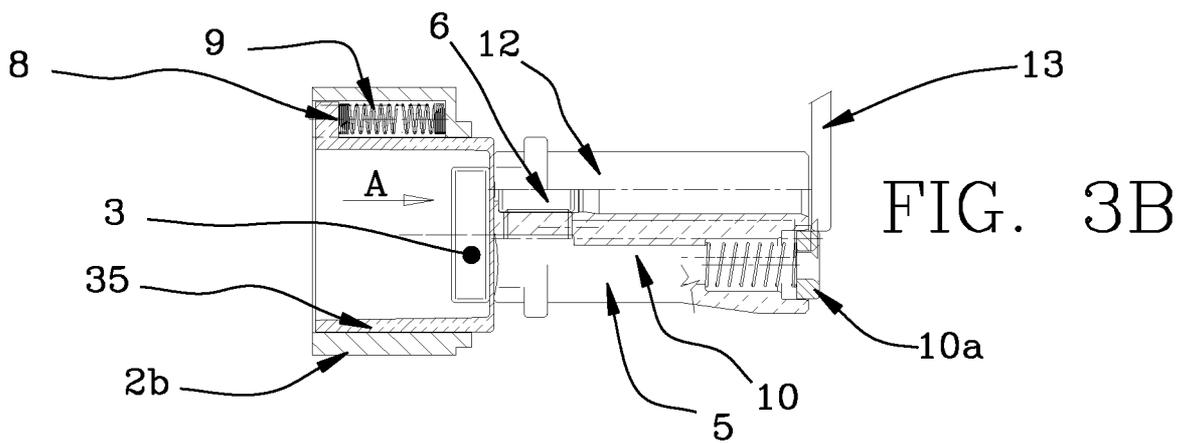
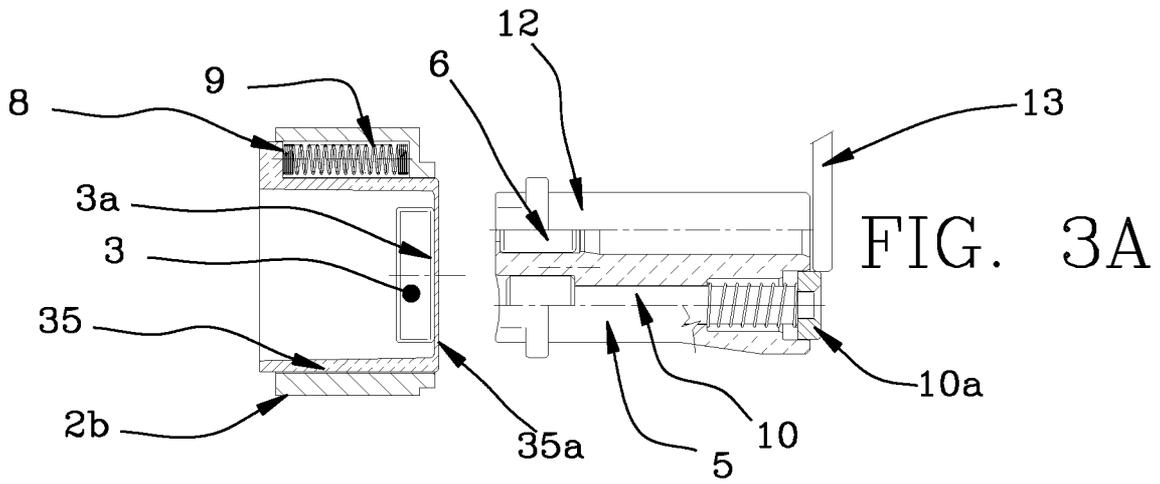
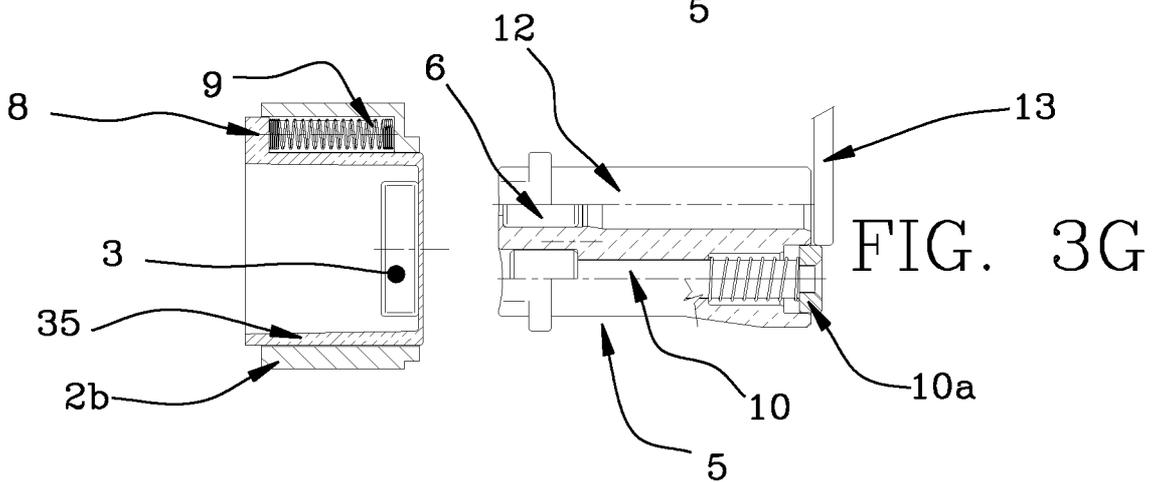
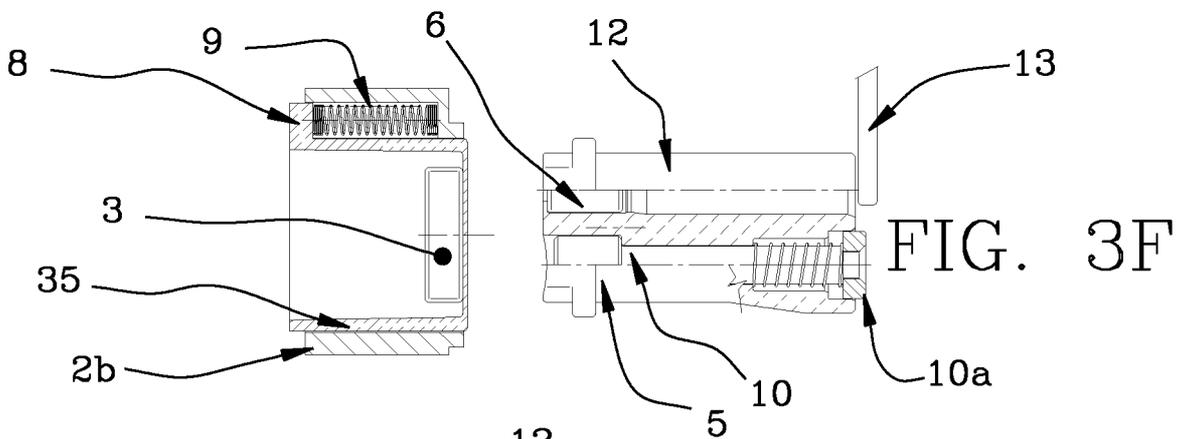
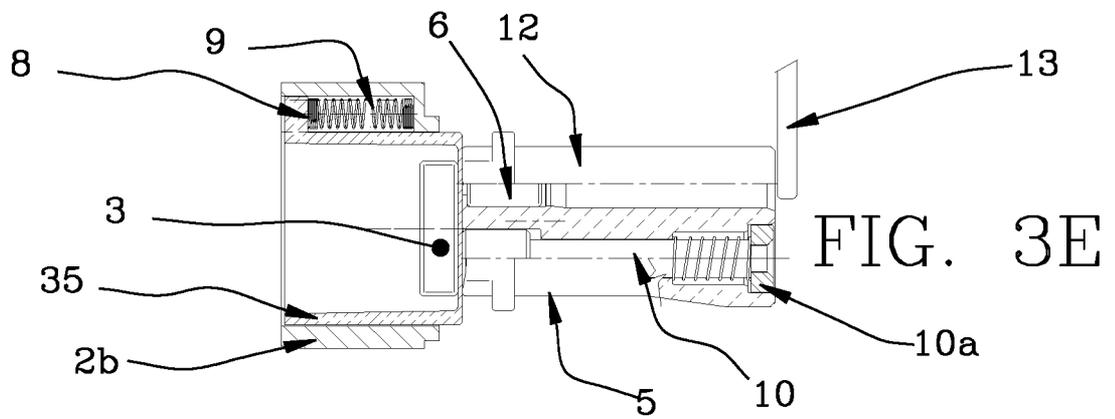
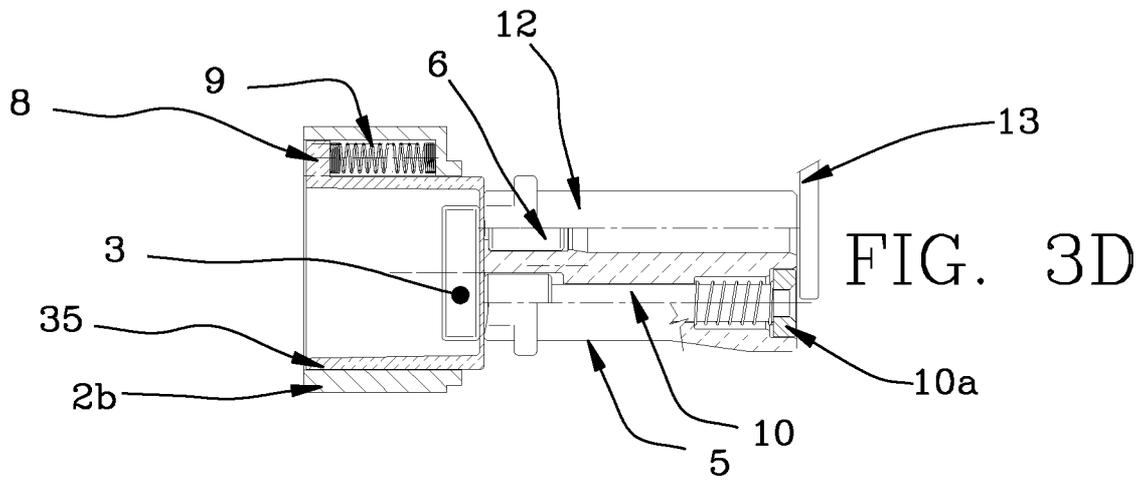
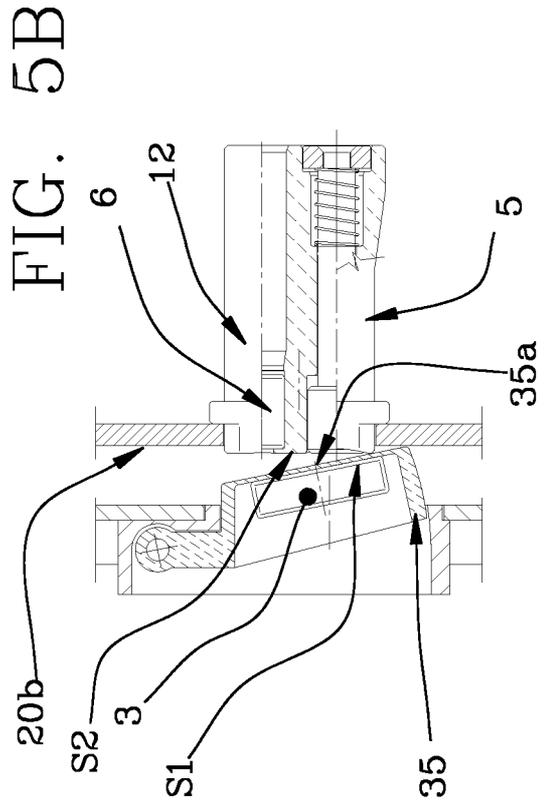
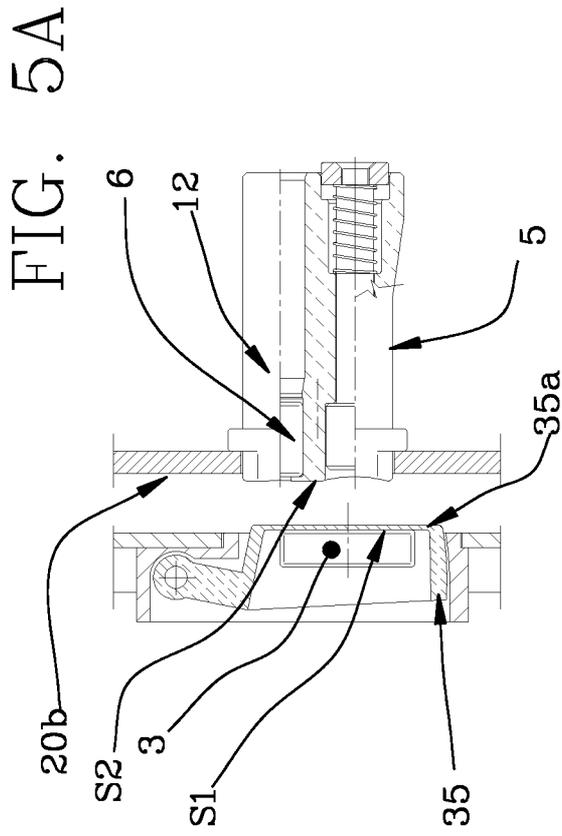
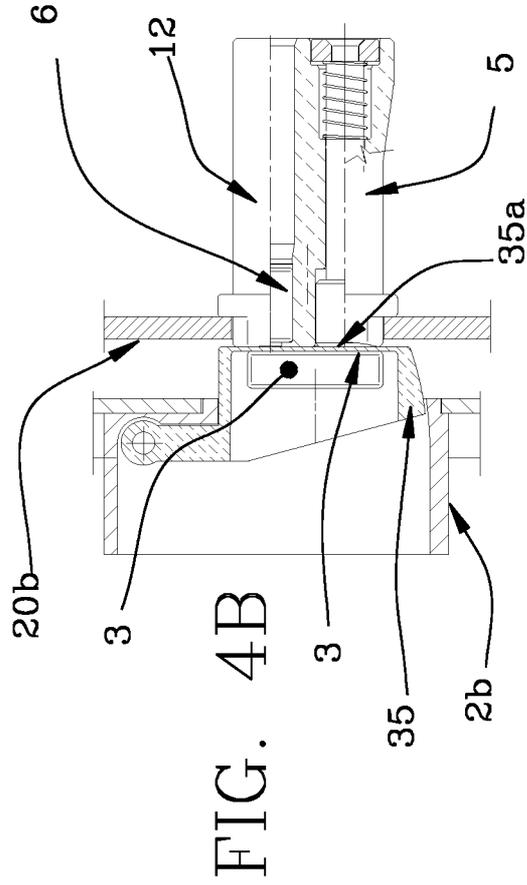
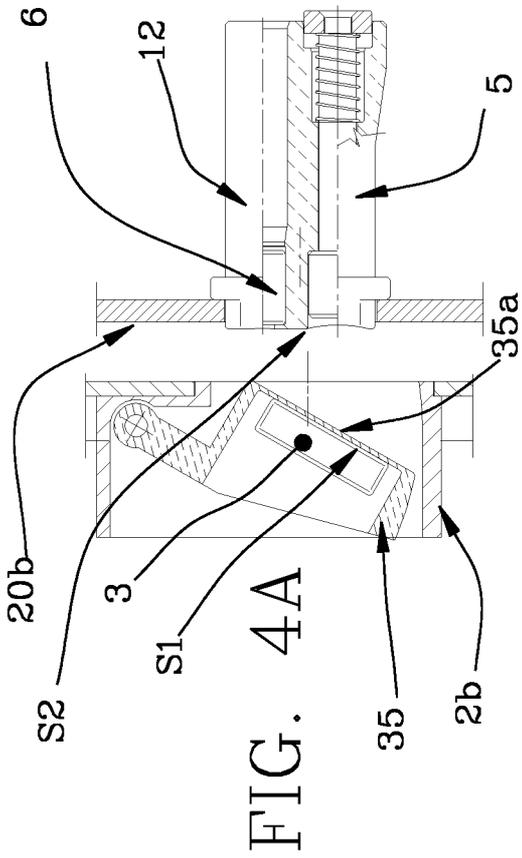


FIG. 2









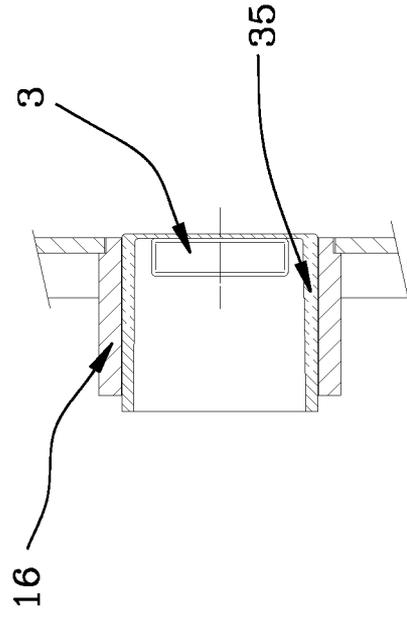


FIG. 7

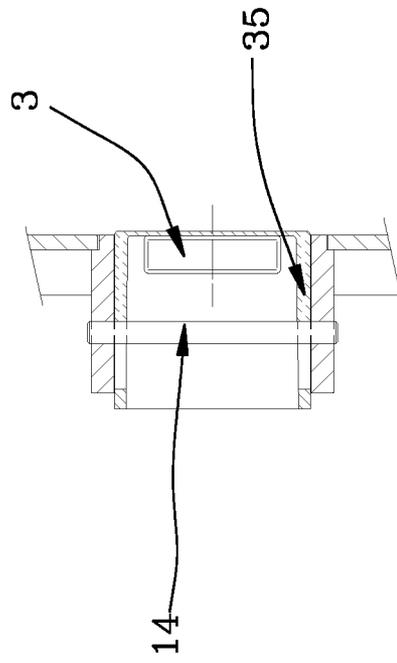


FIG. 6

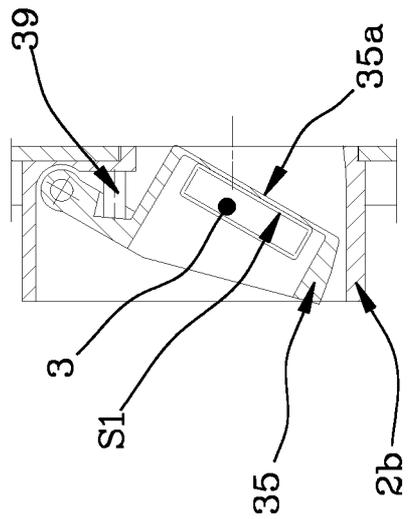
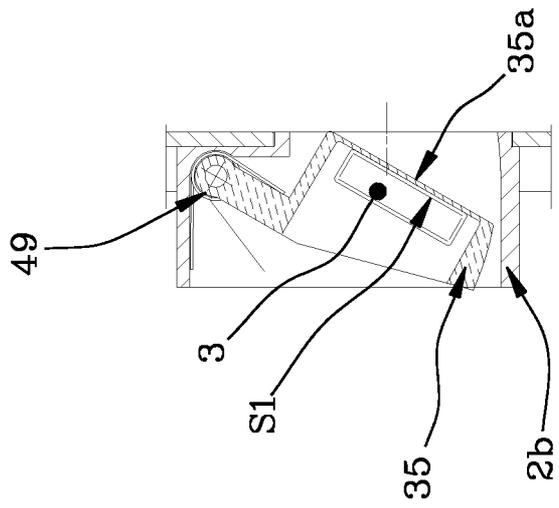
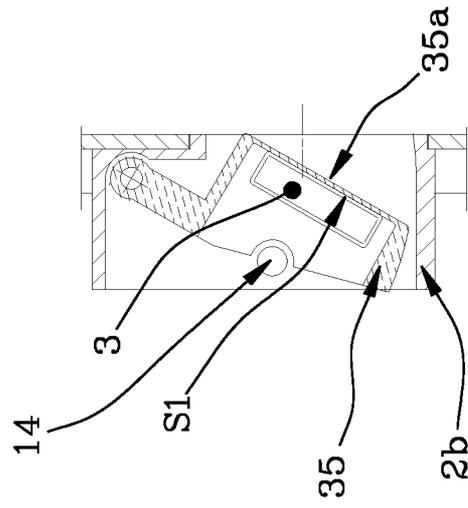


FIG. 10

FIG. 9

FIG. 8

# INTERNATIONAL SEARCH REPORT

International application No PCT/IB2017/050710
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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> INV. E05B63/20 E05B63/00 E05B47/00 ADD.				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) E05B				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	DE 87 04 036 U1 (BKS GMBH) 2 July 1987 (1987-07-02) page 8 - page 9; figure 5 -----	1-5,7, 10-16 6,8,9		
A	-----	-----		
X	EP 2 634 330 A2 (WINKHAUS FA AUGUST [DE]) 4 September 2013 (2013-09-04) paragraph [0016] - paragraph [0022]; figures 2-5 -----	1-5,7, 10-16		
A	JP 2004 183437 A (MIWA LOCK KK) 2 July 2004 (2004-07-02) abstract; figures 1-4 -----	6		
A	FR 2 937 990 A1 (DENY FONTAINE [FR]) 7 May 2010 (2010-05-07) abstract; figures 1-3 -----	6		
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<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.</td> <td style="width: 50%; border: none;"><input checked="" type="checkbox"/> See patent family annex.</td> </tr> </table>			<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.			
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"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family			
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10 April 2017	24/04/2017			
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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/IB2017/050710

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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